

SEARCH REQUEST FORM

57023

Scientific and Technical Information Center

Requester's Full Name: Michael Paul Young Examiner #: 7011 Date: 12/2/01
 Art Unit: 1115 Phone Number 308-7005 Serial Number: 09/787534
 Mail Box and Bldg/Room Location: 2801 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need. MEJ

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Transcendental therapeutic system with and without computer Ketones

Inventors (please provide full names): _____

Earliest Priority Filing Date: 3/24/1999

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please Search for:

searching for monotypic ketones of a 1-30% wt
 and see list of said ketones to the end

Thank You
 4/1/02

STIC

10/23/01

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Searcher: Point of Contact:
Alex Wacławski
 Searcher Phone #: Technical Info. Specialist
 Searcher Location: GM1 12C14 Tel: 308-4491
 Date Searcher Picked Up: 1-3-02
 Date Completed: 1-3-02
 Searcher Prep & Review Time: 10
 Clerical Prep Time: _____
 Online Time: 32

Type of Search

NA Sequence (#) _____
 AA Sequence (#) _____
 Structure (#) _____
 Bibliographic ☒ _____
 Litigation _____
 Fulltext _____
 Patent Family _____
 Other _____

Vendors and cost where applicable

STN 17 9438 100 1550
 Dialog _____
 Questel/Orbit _____
 Dr.Link _____
 Lexis/Nexis _____
 Sequence Systems _____
 WWW/Internet _____
 Other (specify) _____

=> dchis

(FILE 'HOME' ENTERED AT 08:14:20 ON 03 JAN 2002)

FILE 'HCAPLUS' ENTERED AT 08:14:32 ON 03 JAN 2002

FILE 'REGISTRY' ENTERED AT 08:14:38 ON 03 JAN 2002

L1 E NICOTINE/CN
 1 S E3
 E TEREPEENES/CN
 E TERPENES/CN
L2 1 S E3
 E KETONES/CN

FILE 'HCAPLUS' ENTERED AT 08:15:50 ON 03 JAN 2002

L3 14421 S L1 OR NICOTINE#
L4 25855 S L2 OR TERPENES? OR MONOTERPENE# OR TERPENOID#
L5 22 S L3 AND L4
 SET SFIELDS BI
L6 121680 S PERFUM? OR FRAGR? OR ESSENTIAL OIL# OR SMELL? OR ODOR? OR MAL
L7 8 S L6 AND L5
L8 2 S TRANSDERMAL AND L5
L9 8 S L8 OR L7

~~=> fil reg~~

FILE 'REGISTRY' ENTERED AT 08:19:56 ON 03 JAN 2002
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STRUCTURE FILE UPDATES: 1 JAN 2002 HIGHEST RN 380148-72-1
DICTIONARY FILE UPDATES: 1 JAN 2002 HIGHEST RN 380148-72-1

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

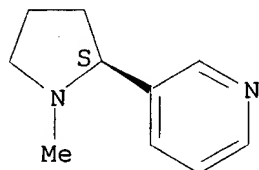
=> d que 11;d 11

L1 1 SEA FILE=REGISTRY ABB=ON NICOTINE/CN

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 54-11-5 REGISTRY
CN Pyridine, 3-[(2S)-1-methyl-2-pyrrolidinyl]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN **Nicotine (8CI)**
CN Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-
OTHER NAMES:
CN (-)-.beta.-Pyridyl-.alpha.-N-methylpyrrolidine
CN (-)-3-(1-Methyl-2-pyrrolidyl)pyridine
CN (-)-Nicotine
CN (S)-(-)-Nicotine
CN (S)-3-(1-Methyl-2-pyrrolidinyl)pyridine
CN (S)-Nicotine
CN Flux Maag
CN L-Nicotine
CN l-Nicotine
CN Nicoderm
CN Niconil
CN Nicorette
CN Nicotin
CN Nicotinell
CN XL All Insecticide
FS STEREOSEARCH
DR 13890-81-8, 13890-82-9, 6912-85-2, 551-13-3, 16760-37-5
MF C10 H14 N2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSChem, CSNB, DDFU,
DETherm*, DIOGENES, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, GMELIN*, HODOC*,
HSDB*, IFICDB, IFIPAT, IFIUDb, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT,
NIOSTIC, PDLCOM*, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO,

TOXCENTER, TOXLIT, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

10340 REFERENCES IN FILE CA (1967 TO DATE)
212 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
10362 REFERENCES IN FILE CAPLUS (1967 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> d que 12; d 12
L2 1 SEA FILE=REGISTRY ABB=ON TERPENES/CN

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
RN 129874-08-4 REGISTRY *

* Use of this CAS Registry Number alone as a search term in other STN files may result in incomplete search results. For additional information, enter HELP RN* at an online arrow prompt (=>).

CN ~~Terpenes~~ Terpenes and Terpenoids (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN **Terpenes**

OTHER NAMES:

CN BBR2

CN Dertosol N

CN HFT 1

CN Hydrocarbons, terpenic

CN Norpine 65

CN Rentry D

CN Terpanes

CN Terpenoids

MF Unspecified

CI MAN, CTS

SR CAS Registry Services

LC STN Files: ADISNEWS, AGRICOLA, CHEMCATS, CHEMLIST, CIN, MEDLINE, TOXCENTER

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 08:20:12 ON 03 JAN 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 3 Jan 2002 VOL 136 ISS 1
FILE LAST UPDATED: 2 Jan 2002 (20020102/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

HCAplus now provides online access to patents and literature covered in CA from 1907 to the present. Bibliographic information and abstracts were added in 2001 for over 3.8 million records from 1907-1966.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

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(FILE 'REGISTRY' ENTERED AT 08:14:38 ON 03 JAN 2002)
E KETONES/CN

FILE 'HCAPLUS' ENTERED AT 08:15:50 ON 03 JAN 2002

L3 14421 S L1 OR NICOTINE#
L4 25855 S L2 OR TERPENES? OR MONOTERPENE# OR TERPENOID#
L5 22 S L3 AND L4
SET SFIELDS BI
L6 121680 S PERFUM? OR FRAGR? OR ESSENTIAL OIL# OR SMELL? OR ODOR? OR MAL
L7 8 S L6 AND L5
L8 2 S TRANSDERMAL AND L5
L9 8 S L8 OR L7

FILE 'REGISTRY' ENTERED AT 08:19:56 ON 03 JAN 2002

FILE 'HCAPLUS' ENTERED AT 08:20:12 ON 03 JAN 2002

=> d .ca 1-8

L9 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:842310 HCAPLUS
DOCUMENT NUMBER: 135:376708
TITLE: Use of cyclodextrin derivatives for skin preparations,
etc., their micelles or nanoparticles, and
compositions containing the derivatives
INVENTOR(S): Eric, Perrier; Nicholas, Terry; Rival, Delphine;
Coleman, Anthony
PATENT ASSIGNEE(S): Coletica, Fr.
SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.

DOCUMENT TYPE: CODEN: JKXXAF
 LANGUAGE: Patent
 FAMILY ACC. NUM. COUNT: 1 Japanese
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001323002	A2	20011120	JP 2000-222967	20000724
FR 2808691	A1	20011116	FR 2000-6102	20000512
GB 2362102	A1	20011114	GB 2000-16653	20000706
DE 10033990	A1	20011122	DE 2000-10033990	20000713

PRIORITY APPLN. INFO.:

FR 2000-6102 A 20000512

AB Cyclodextrin in which OH groups are substituted with OCOR or NR₁R₂ [R, R₁, R₂ = C₁-30, preferably C₂-22 chain or cyclic (un)satd.

(hydroxy)hydrocarbyl], are useful as tissue penetration promoters for cosmetics and drugs, etc. The cyclodextrin derivs. may form micelles or nanoparticles, in which active components are enclosed. Also claimed are compns. contg. the derivs. and vehicles, esp. phospholipids such as lecithins, surfactants, or cationic lipids, and method for skin-care method by applying the cyclodextrin derivs. to body including face.

.beta.-Cyclodextrin laurate (no. of laurate residue is 6-10, prepn. given) was dissolved in acetone and the soln. was gradually added to H₂O to give milky white soln. Acetone was evapd. from the soln. and the residue was redispersed in H₂O to give nanoparticles having av. particle size 212 nm .+- 5 nm.

IC ICM C08B037-16

ICS A61K007-00; A61K007-025; A61K007-032; A61K007-075; A61K009-10; A61K047-40

CC 63-5 (Pharmaceuticals)

Section cross-reference(s): 17, 62

IT Chromophores

Cosmetics

Dyes

Food

Micelles

Nanoparticles

Perfumes

Skin preparations (pharmaceutical)

(prepn. of cyclodextrin esters or amino derivs. capable of forming micelles or nanoparticles for drugs, cosmetics, and food)

IT Amino acids, biological studies

Carbohydrates, biological studies

Ceramides

Essential oils

Flavonoids

Glycerides, biological studies

Glycolipids

Hormones, animal, biological studies

Nucleosides, biological studies

Nucleotides, biological studies

Oligonucleotides

Oligosaccharides, biological studies

Peptides, biological studies

Phospholipids, biological studies

Polymers, biological studies

Polysaccharides, biological studies

Proteins, general, biological studies

Sphingolipids

Steroids, biological studies

Sterols

Terpenes, biological studies

Vitamins

RL: BUU (Biological use, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(prepn. of cyclodextrin esters or amino derivs. capable of forming micelles or nanoparticles for drugs, cosmetics, and food)

IT 54-11-5, Nicotine 57-88-5, Cholesterol, biological studies 58-08-2, Caffeine, biological studies 58-55-9, Theophylline, biological studies 1406-18-4, Vitamin E

RL: BUU (Biological use, unclassified); FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(prepn. of cyclodextrin esters or amino derivs. capable of forming micelles or nanoparticles for drugs, cosmetics, and food)

L9 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:396664 HCAPLUS

DOCUMENT NUMBER: 134:371827

TITLE: Composition comprising ozonized oils and/or other ozonized natural and/or synthetic products and their use in pharmaceutical, cosmetic, dietetic or food supplement compositions in human and veterinary medicine

INVENTOR(S): Gomez Moraleda, Manuel-antonio; Dall'aglio, Roberto; Melegari, Pierangelo

PATENT ASSIGNEE(S): Spain

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Spanish

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001037829	A1	20010531	WO 2000-ES208	20000609
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: ES 1999-2602 A 19991125

AB The compn. comprises (i) one or more ozonized oils and/or natural and/or synthetic ozonized products and (ii) thioctic acid and/or the derivs. thereof, wherein each of the components is present in a concn. ranging from 0.01 to 99.99 by wt. in relation to total wt. and optionally one or more active substances, additives, vehicles or excipients. Said compn. can be used to prep. pharmaceutical, cosmetic, dietetic and food supplement compns. for humans and animals.

IC ICM A61K031-327

ICS A61K031-385

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 2, 17, 62

IT Alkaloids, biological studies

Amino acids, biological studies

Diterpenes

Essential oils

Fluoropolymers, biological studies

Monoterpenes

Sesquiterpenes

Triterpenes

Vitamins

RL: BUU (Biological use, unclassified); FFD (Food or feed use); PEP (Physical, engineering or chemical process); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (compn. comprising ozonized oils and/or other ozonized natural and/or synthetic products and their use in pharmaceutical, cosmetic, dietetic or food supplement compns. in human and veterinary medicine)

IT 50-81-7, Vitamin c, biological studies 52-90-4, Cysteine, biological studies 54-11-5, **Nicotine** 56-40-6, Glycine, biological studies 60-33-3, Linoleic acid, biological studies 70-18-8, Glutathione, biological studies 73-31-4, Melatonin 74-79-3, Arginine, biological studies 79-83-4, Pantothenic acid 110-15-6, Succinic acid, biological studies 110-17-8, Fumaric acid, biological studies 146-48-5, Yohimbine 303-98-0, Coenzyme q10 541-15-1, Carnitine 616-91-1, N-Acetylcysteine 1406-16-2, Vitamin d 1406-18-4, Vitamin e 7512-17-6, Acetylglucosamine 9004-61-9, Hyaluronic acid 10417-94-4, Icosapentaenoic acid 11103-57-4, Vitamin a 12001-76-2, Vitamin b

RL: BUU (Biological use, unclassified); FFD (Food or feed use); PEP (Physical, engineering or chemical process); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (compn. comprising ozonized oils and/or other ozonized natural and/or synthetic products and their use in pharmaceutical, cosmetic, dietetic or food supplement compns. in human and veterinary medicine)

REFERENCE COUNT: 9

REFERENCE(S): (1) Cosmart Ag; FR 2730636 A1 1996 HCAPLUS
 (2) Devillez, R; US 4451480 A 1984 HCAPLUS
 (3) Dr J Hansler GmbH; EP 0235528 A1 1987 HCAPLUS
 (4) GABelein, K; DE 1255660 A 1967 HCAPLUS
 (5) Gaynor, M; US 5904924 A 1999 HCAPLUS
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:686121 HCAPLUS

DOCUMENT NUMBER: 133:271632

TITLE: **Nicotine transdermal** therapeutic system with added **monoterpene** ketones

INVENTOR(S): Bracht, Stefan

PATENT ASSIGNEE(S): LTS Lohmann Therapie-Systeme A.-G., Germany

SOURCE: Ger. Offen., 4 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19913732	A1	20000928	DE 1999-19913732	19990326
WO 2000057824	A1	20001005	WO 2000-EP2457	20000321

W: AU, BR, CA, CN, CZ, HU, IL, IN, JP, KR, MX, NZ, PL, RU, TR, US, ZA

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: DE 1999-19913732 A 19990326

AB A **transdermal** therapeutic system with a backing layer is disclosed which has at least one nicotine-contg. layer or zone (which can

also exhibit adhesive characteristics), as well as a removable protective layer, is characterized by its content of at least one mint-species **essential oil** or a monoterpene ketone that occurs in such **essential oils**.

- IC ICM A61L015-44
 CC 63-5 (Pharmaceuticals)
 Section cross-reference(s): 4
 ST **transdermal delivery nicotine monoterpene ketone**
 IT **Essential oils**
 RL: BPR (Biological process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (mint, Mentha; **nicotine transdermal** therapeutic system with added **monoterpene ketones**)
 IT **Terpenes, biological studies**
 RL: BPR (Biological process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (oxo; **nicotine transdermal** therapeutic system with added **monoterpene ketones**)
 IT **Essential oils**
 RL: BPR (Biological process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (peppermint; **nicotine transdermal** therapeutic system with added **monoterpene ketones**)
 IT **Essential oils**
 RL: BPR (Biological process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (spearmint; **nicotine transdermal** therapeutic system with added **monoterpene ketones**)
 IT Ketones, biological studies
 RL: BPR (Biological process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (**terpenoid; nicotine transdermal** therapeutic system with added **monoterpene ketones**)
 IT Drug delivery systems
 (**transdermal; nicotine transdermal** therapeutic system with added **monoterpene ketones**)
 IT **54-11-5, Nicotine**
 RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (**nicotine transdermal** therapeutic system with added **monoterpene ketones**)
 IT 89-80-5, Menthone 89-80-5D, Menthone, derivs. 89-81-6, Piperitone
 99-49-0, Carvone 491-07-6, Isomenthone 2216-51-5, (-)-Menthol
 5948-04-9, Dihydrocarvone 14073-97-3, (-)-Menthone 29606-79-9, Isopulegone
 RL: BPR (Biological process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (**nicotine transdermal** therapeutic system with added **monoterpene ketones**)
 REFERENCE COUNT: 7
 REFERENCE(S): (1) Anon; EP 0356382 A2 HCAPLUS
 (2) Anon; US 4933184 HCAPLUS

(4) Anon; US 5593684 HCAPLUS
 (6) Anon; WO 9501788 A1 HCAPLUS
 (7) Anon; WO 9508324 A1 HCAPLUS
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 1998:207280 HCAPLUS
 DOCUMENT NUMBER: 128:275101
 TITLE: Gas and gaseous precursor filled microspheres as
 topical and subcutaneous delivery vehicles
 INVENTOR(S): Unger, Evan C.; Matsunaga, Terry O.; Yellowhair, David
 PATENT ASSIGNEE(S): Imarx Pharmaceutical Corp., USA
 SOURCE: U.S., 40 pp. Cont.-in-part of U.S. Ser. No. 307,305.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 19
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5733572	A	19980331	US 1994-346426	19941129
US 5088499	A	19920218	US 1990-569828	19900820
WO 9109629	A1	19910711	WO 1990-US7500	19901219
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
JP 05502675	T2	19930513	JP 1991-503276	19901219
AT 180170	E	19990615	AT 1991-902857	19901219
ES 2131051	T3	19990716	ES 1991-902857	19901219
US 5228446	A	19930720	US 1991-717084	19910618
WO 9222247	A1	19921223	WO 1992-US2615	19920331
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
AU 9220020	A1	19930112	AU 1992-20020	19920331
AU 667471	B2	19960328		
JP 06508364	T2	19940922	JP 1992-500847	19920331
EP 616508	A1	19940928	EP 1992-912456	19920331
EP 616508	B1	20010718		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
AT 203148	E	20010815	AT 1992-912456	19920331
US 5469854	A	19951128	US 1993-76239	19930611
US 5580575	A	19961203	US 1993-76250	19930611
US 5348016	A	19940920	US 1993-88268	19930707
US 5542935	A	19960806	US 1993-160232	19931130
US 5585112	A	19961217	US 1993-159687	19931130
US 5769080	A	19980623	US 1994-199462	19940222
WO 9428874	A1	19941222	WO 1994-US5633	19940519
W: AU, CA, CN, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5773024	A	19980630	US 1994-307305	19940916
CA 2177713	AA	19950608	CA 1994-2177713	19941130
JP 09506098	T2	19970617	JP 1994-515763	19941130
US 5571497	A	19961105	US 1995-468056	19950606
CN 1180310	A	19980429	CN 1996-193069	19960327
US 6001335	A	19991214	US 1996-665719	19960618
US 5935553	A	19990810	US 1996-758179	19961125
US 5985246	A	19991116	US 1997-888426	19970708
AU 713127	B2	19991125	AU 1998-56271	19980224
AU 9856271	A1	19980507		
AU 9888405	A1	19981203	AU 1998-88405	19981012

AU 731072 B2 20010322
 AU 9910043 A1 19990304
 PRIORITY APPLN. INFO.:

AU 1999-10043 19990104
 US 1989-455707 B2 19891222
 US 1990-569828 A2 19900820
 US 1991-716899 B2 19910618
 US 1991-717084 A2 19910618
 US 1993-76239 A2 19930611
 US 1993-76250 A2 19930611
 US 1993-159674 B2 19931130
 US 1993-159687 A2 19931130
 US 1993-160232 A2 19931130
 US 1994-307305 A2 19940916
 WO 1990-US7500 W 19901219
 US 1991-750877 A3 19910826
 US 1992-818069 A3 19920108
 WO 1992-US2615 A 19920331
 US 1992-967974 A3 19921027
 US 1993-17683 A3 19930212
 US 1993-18112 B3 19930217
 US 1993-85608 A3 19930630
 US 1993-88268 A3 19930707
 US 1993-309305 A 19931130
 US 1993-163039 A3 19931206
 US 1994-212553 B2 19940311
 AU 1994-70416 A3 19940519
 US 1994-346426 19941129
 AU 1995-21850 A3 19941130
 WO 1994-US13817 W 19941130
 US 1995-395683 A3 19950228
 US 1995-468056 A3 19950606
 US 1995-471250 A3 19950606
 US 1996-665719 A3 19960618

AB Gas and gaseous precursor filled microspheres, and foams provide novel topical and s.c. delivery vehicles for various active ingredients, including drugs and cosmetics. Gas and gaseous precursor filled microcapsules were prepd. from dipalmitoylphosphatidylcholine.

IC ICM A61K009-127

NCL 424450000

CC 63-6 (Pharmaceuticals)
 Section cross-reference(s): 62

IT Acacia
 Alcohols, biological studies
 Alkanes, biological studies
 Alkylbenzyltrimethylammonium chlorides
 Allergy inhibitors
 Amines, biological studies
 Anthocyanins
 Anti-inflammatory drugs
 Antibacterial agents
 Antibiotics
 Anticoagulants
 Antioxidants
 Antisense oligonucleotides
 Antiviral agents
 Bentonite, biological studies
 Buffers
 Canola oil
 Carbohydrates, biological studies
 Cardiovascular agents
 Chelating agents

Collagens, biological studies
Coloring materials
Corn oil
Cosmetics
DNA
Digalactosyl diglycerides
Diuretics
Dystrophin
Elastins
Enkephalins
Enzymes, biological studies
 Essential oils
Esters, biological studies
Fatty acids, biological studies
Fluoro hydrocarbons
Fluoropolymers, biological studies
Foaming agents
Fungicides
Gases
Genes (animal)
Glycolipids
Glycols, biological studies
Growth factors (animal)
Hormones (animal), biological studies
Immunosuppressants
Lipids, biological studies
Local anesthetics
Micelles
Microcapsules (drug delivery systems)
Microencapsulation
Monoclonal antibodies
Ointments (drug delivery systems)
Olive oil
Peanut oil
Peptides, biological studies
Perfluorocarbons
Petrolatum
Phosphatidic acids
Phosphatidylcholines, biological studies
Phosphatidylethanolamines, biological studies
Phosphatidylglycerols
Phosphatidylinositols
Phosphatidylserines
Phospholipids, biological studies
Polyamides, biological studies
Polyesters, biological studies
Polyolefins
Polyoxyalkylenes, biological studies
Polysaccharides, biological studies
Polyurethanes, biological studies
Preservatives
Protozoacides
Quaternary ammonium compounds, biological studies
Radionuclides
Safflower oil
Sphingolipids
Sugar esters
Sulfatides
Sulfoxides
 Terpenes, biological studies

Tocopherols

Tuberculostatics

Vitamins

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(gas and gaseous precursor filled microspheres as topical and s.c. delivery vehicles)

IT 50-02-2, Dexamethasone 50-03-3, Hydrocortisone acetate 50-04-4, Cortisone acetate 50-23-7, Hydrocortisone 50-24-8 50-33-9, Phenylbutazone, biological studies 50-56-6, Oxytocin, biological studies 50-70-4, Sorbitol, biological studies 50-78-2, Aspirin 50-81-7, Ascorbic acid, biological studies 51-05-8, Procaine hydrochloride 51-34-3, Scopolamine 52-21-1 52-67-5, Penicillamine 53-03-2, Prednisone 53-36-1, Methylprednisolone acetate 53-86-1, Indomethacin 54-05-7, Chloroquine 54-11-5, Nicotine 54-85-3, Isoniazid 56-75-7, Chloramphenicol 56-81-5, 1,2,3-Propanetriol, biological studies 57-09-0, Cetyltrimethylammonium bromide 57-11-4, Octadecanoic acid, biological studies 57-13-6, Urea, biological studies 57-15-8, Chlorobutanol 57-55-6, 1,2-Propanediol, biological studies 57-88-5, Cholesterol, biological studies 58-08-2, Caffeine, biological studies 59-02-9, .alpha.-Tocopherol 60-00-4, Edta, biological studies 60-54-8, Tetracycline 61-32-5, Methicillin 61-33-6, Penicillin g, biological studies 61-68-7, Mefenamic acid 64-17-5, Ethanol, biological studies 65-49-6, p-Aminosalicylic acid 65-85-0, Benzoic acid, biological studies 66-79-5, Oxacillin 67-43-6, DTPA 67-56-1, Methanol, biological studies 67-68-5, DmsO, biological studies 67-78-7, Triamcinolone diacetate 68-19-9D, Cyanocobalamin, derivs. 68-41-7, Cycloserine 69-53-4, Ampicillin 69-72-7, Salicylic acid, biological studies 73-78-9, Lidocaine hydrochloride 74-88-4, Iodomethane, biological studies 74-98-6, Propane, biological studies 75-00-3, Chloroethane 75-10-5, Difluoromethane 75-18-3, Methyl sulfide 75-19-4, Cyclopropane 75-28-5, Isobutane 75-29-6, 2-Chloropropane 75-31-0, 2-Aminopropane, biological studies 75-34-3, 1,1-Dichloroethane 75-43-4, Dichlorofluoromethane 75-45-6, Chlorodifluoromethane 75-46-7, Trifluoromethane 75-56-9, biological studies 75-61-6, Dibromodifluoromethane 75-63-8, Bromotrifluoromethane 75-69-4, Trichlorofluoromethane 75-71-8, Dichlorodifluoromethane 75-72-9, Chlorotrifluoromethane 75-73-0, Tetrafluoromethane 76-13-1, 1,1,2-Trichloro-1,2,2-trifluoroethane 76-15-3, 1-Chloro-1,1,2,2,2-pentafluoroethane 76-16-4, Hexafluoroethane 76-19-7, Perfluoropropane 76-25-5, Triamcinolone acetonide 77-92-9, Citric acid, biological studies 78-78-4, 2-Methylbutane 78-79-5, biological studies 78-80-8 79-81-2, Retinol palmitate 80-08-0 83-43-2, Methylprednisolone 87-08-1, Penicillin v 87-73-0, Saccharic acid 93-60-7, Methyl nicotinate 94-14-4, Isobutyl p-aminobenzoate 94-26-8, Butylparaben 95-80-7, 2,4-Diaminotoluene 96-40-2, 3-Chlorocyclopentene 96-49-1, 1,3-Dioxolan-2-one 98-96-4, Pyrazinamide 99-76-3, Methylparaben 100-51-6, Benzyl alcohol, biological studies 102-71-6, biological studies 103-41-3, Benzyl cinnamate 106-98-9, 1-Butene, biological studies 106-99-0, 1,3-Butadiene, biological studies 107-00-6, 1-Butyne 107-01-7, 2-Butene 107-25-5, Methyl vinyl ether 107-41-5, Hexylene glycol 108-95-2, Phenol, biological studies 109-66-0, n-Pentane, biological studies 109-67-1, 1-Pentene 109-92-2, Ethyl vinyl ether 109-93-3 110-27-0, Isopropyl myristate 110-44-1, Sorbic acid 111-02-4, Squalene 111-42-2, biological studies 112-30-1, 1-Decanol 112-53-8, 1-Dodecanol 112-72-1, Myristyl alcohol 112-80-1, 9-Octadecenoic acid (Z)-, biological studies 112-92-5, n-Octadecyl alcohol 114-07-8, Erythromycin 115-10-6, Methyl ether 115-25-3, Octafluorocyclobutane 118-42-3, Hydroxychloroquine 118-58-1, Benzyl salicylate 121-54-0, Benzethonium chloride 122-18-9, Benzyl dimethyl hexadecylammonium chloride 122-57-6, 4-Phenyl-3-butene-2-one 123-03-5

124-03-8, Cetyldimethylethylammonium bromide 124-38-9, Carbon dioxide, biological studies 124-40-3, Dimethylamine, biological studies 124-94-7, Triamcinolone 125-02-0, Prednisolone sodium phosphate 125-04-2, Hydrocortisone sodium succinate 126-07-8, Griseofulvin 126-18-1, Smilagenin 126-19-2, Sarsasapogenin 129-20-4, Oxyphenbutazone 130-95-0, Quinine 133-51-7, Meglumine antimonate 136-47-0, Tetracaine hydrochloride 137-66-6, Ascorbyl palmitate 139-07-1, Benzyltrimethylammonium chloride 139-08-2, Benzyltrimethyl tetradecylammonium chloride 140-72-7, Cetylpyridinium bromide 141-43-5, biological studies 143-28-2, Oleyl alcohol 143-62-4, Digitoxigenin 147-52-4, Nafcillin 151-21-3, Sodium lauryl sulfate, biological studies 151-73-5, Betamethasone sodium phosphate 154-21-2, Lincomycin 287-23-0, Cyclobutane 302-79-4, Retinoic acid 334-99-6, Nitrosotrifluoromethane 335-02-4, Nitrotrifluoromethane 335-05-7, Trifluoromethanesulfonyl fluoride 335-57-9, Perfluoroheptane 338-65-8, 2-Chloro-1,1-difluoroethane 350-51-6, 3-Fluorostyrene 353-36-6, Fluoroethane 353-85-5, Trifluoroacetonitrile 353-87-7, Bromodifluoronitrosomethane 354-25-6, 1-Chloro-1,1,2,2-tetrafluoroethane 354-72-3, Nitrosopentafluoroethane 354-80-3, Perfluoroethylamine 354-81-4, Nitropentafluoroethane 355-25-9, Decafluorobutane 355-42-0, Perfluorohexane 357-26-6, Perfluoro-1-butene 359-35-3, 1,1,2,2-Tetrafluoroethane 360-89-4, Perfluoro-2-butene 371-67-5, 1,1,1-Trifluorodiazethane 371-77-7 371-78-8, Trifluoromethyl sulfide 373-52-4, Bromofluoromethane 374-07-2, 1,1-Dichloro-1,2,2,2-tetrafluoroethane 376-87-4, Perfluoropent-1-ene 378-44-9, Betamethasone 420-45-1, 2,2-Difluoropropane 420-46-2, 1,1,1-Trifluoroethane 421-56-7, Chlorodifluoronitromethane 421-83-0, Trifluoromethanesulfonyl chloride 423-26-7, Heptafluoro-1-nitrosopropane 423-33-6, Propane, 1,1,1,2,2,3,3,heptafluoro-3-nitro- 430-53-5, 1,1-Dichloro-2-fluoroethane 435-97-2, Phenprocoumon 443-48-1, Metronidazole 460-12-8, Butadiyne 460-13-9, 1-Fluoropropane 461-68-7, Tetrafluoroallene 463-49-0, Allene 463-58-1, Carbonyl sulfide 463-82-1, Neopentane 465-65-6, Naloxone 465-99-6, Hederagenin 482-54-2, Cyclohexanediarnetetraacetic acid 503-17-3, 2-Butyne 508-02-1, Oleanolic acid 508-99-6, Hydrocortisone cypionate 514-36-3, Fludrocortisone acetate 521-13-1, Cholesterol butyrate 526-95-4, Gluconic acid 532-32-1, Sodium benzoate 536-33-4, Ethionamide 540-54-5, 1-Chloropropane 547-64-8, Methyl lactate 555-43-1, Glycerol tristearate 555-44-2, Glycerol tripalmitate 555-45-3, Glycerol trimyristate 559-40-0, Octafluorocyclopentene 563-45-1, 3-Methyl-1-butene 563-46-2, 2-Methyl-1-butene 582-25-2, Potassium benzoate 590-19-2, 1,2-Butadiene 591-93-5, 1,4-Pentadiene 593-53-3, Fluoromethane 593-70-4, Chlorofluoromethane 593-98-6, Bromochlorofluoromethane 594-11-6, Methylcyclopropane 598-23-2, 3-Methyl-1-butyne 598-53-8, Methyl iso-propyl ether 598-56-1 598-61-8, Methylcyclobutane 601-34-3, Cholesterol palmitate 623-84-7, Propylene glycol diacetate 624-72-6, 1,2-Difluoroethane 624-91-9, Methyl nitrite 625-04-7, 4-Amino-4-methylpentan-2-one 632-58-6, Tetrachlorophthalic acid 644-62-2 661-54-1, 3,3,3-Trifluoropropyne 661-97-2, 1,1,1,2,3,3-Hexafluoro-2,3 dichloropropane 677-56-5, 1,1,1,2,2,3-Hexafluoropropane 678-26-2, Perfluoropentane 684-16-2, Hexafluoro acetone 685-63-2, Hexafluoro-1,3-butadiene 689-97-4, Vinyl acetylene 692-50-2, Perfluoro-2-butyne 697-11-0, Perfluorocyclobutene 767-00-0, 4-Cyanophenol 768-94-5, Amantadine 822-16-2, Sodium stearate 921-13-1, Chlorodinitromethane

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (gas and gaseous precursor filled microspheres as topical and s.c. delivery vehicles)

ACCESSION NUMBER: 1995:279166 HCAPLUS
DOCUMENT NUMBER: 122:101646
TITLE: Allelopathic properties of alkaloids and other natural products. Possible modes of action
AUTHOR(S): Wink, M.; Latz-Bruening, B.
CORPORATE SOURCE: Inst. Pharm. Biol., Univ. Heidelberg, Heidelberg, D-69120, Germany
SOURCE: ACS Symp. Ser. (1995), 582 (Allelopathy), 117-26
CODEN: ACSMC8; ISSN: 0097-6156
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Out of a selection of 30 alkaloids and 26 other compds. 19 natural products were found with allelopathic properties and in vitro assays were carried out to elucidate their modes of action. Most compds. affect more than 1 mol. target: 8 compds. interact with DNA, 10 inhibit DNA polymerase I, reverse transcriptase, and protein biosynthesis and 3 lead to membrane leakage. It is suggested that the allelopathy obsd. is (at least) partly due to interaction of the compds. tested with these basic targets such as DNA and related processes, protein biosynthesis and membrane stability.

CC 11-1 (Plant Biochemistry)
Section cross-reference(s): 1

IT Alkaloids, biological studies
Amines, biological studies
Amino acids, biological studies
Carbohydrates and Sugars, biological studies
Carboxylic acids, biological studies
Essential oils
Salts, biological studies
Saponins
Tannins
Terpenes and Terpenoids, biological studies
RL: BAC (Biological activity or effector, except adverse); BIOL
(Biological study)
(allelopathic properties of alkaloids and modes of action)

IT **Essential oils**
RL: BAC (Biological activity or effector, except adverse); BIOL
(Biological study)
(citrus, allelopathic properties of alkaloids and modes of action)

IT **Essential oils**
RL: BAC (Biological activity or effector, except adverse); BIOL
(Biological study)
(eucalyptus, allelopathic properties of alkaloids and modes of action)

IT **Essential oils**
RL: BAC (Biological activity or effector, except adverse); BIOL
(Biological study)
(mint, Mentha, allelopathic properties of alkaloids and modes of action)

IT 50-81-7, Ascorbic acid, biological studies 51-34-3, Scopolamine
51-55-8, Atropine, biological studies **54-11-5, Nicotine**
56-40-6, Glycine, biological studies 56-54-2, Quinidine 56-87-1,
Lysine, biological studies 57-24-9, Strychnine 57-50-1, Sucrose,
biological studies 58-08-2, Caffeine, biological studies 58-55-9,
Theophylline, biological studies 58-74-2, Papaverine 60-79-7,
Ergometrine 61-54-1, Tryptamine 64-86-8, Colchicine 66-81-9,
Cycloheximide 70-47-3, Asparagine, biological studies 77-06-5,
Gibberellic acid 77-92-9, Citric acid, biological studies 87-52-5,
Gramine 89-31-6, Salsoline 90-39-1, Sparteine 90-69-7, Lobeline
101-31-5, Hyoscyamine 113-15-5, Ergotamine 118-10-5, Cinchonine
120-29-6, Tropine 128-62-1, Narcotine 130-95-0, Quinine 138-52-3,
Salicine 299-42-3, (-)-Ephedrine 302-27-2, Aconitine 304-21-2,

Harmaline 321-98-2, (+)-Ephedrine 476-32-4, Chelidonine 480-41-1, Naringenin 483-04-5, Ajmalicine 485-35-8, Cytisine 529-64-6, Tropic acid 1239-45-8, Ethidium bromide 2086-83-1, Berberine 2447-54-3, Sanguinarin 5096-57-1 7447-40-7, Potassium chloride, biological studies 7558-80-7, Sodium dihydrogen phosphate 7631-99-4, Sodium nitrate, biological studies 7647-14-5, Sodium chloride, biological studies 7757-82-6, Sodium sulfate, biological studies
 RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
 (allelopathic properties of alkaloids and modes of action)

L9 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1993:678769 HCAPLUS

DOCUMENT NUMBER: 119:278769

TITLE: Manufacture of multilayered controlled-release **transdermal** patches

INVENTOR(S): Wick, John; Weimann, Ludwig J.; Pollock, Wayne C.

PATENT ASSIGNEE(S): Mli Acquisition Corp. II, USA

SOURCE: Eur. Pat. Appl., 35 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 563507	A1	19931006	EP 1992-850190	19920813
EP 563507	B1	19980527		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CA 2075517	AA	19931002	CA 1992-2075517	19920807
CA 2075517	C	19970311		
AT 166574	E	19980615	AT 1992-850190	19920813
ES 2118124	T3	19980916	ES 1992-850190	19920813
BR 9203172	A	19931019	BR 1992-3172	19920814
PRIORITY APPLN. INFO.:			US 1992-861534	19920401

AB Controlled-release **transdermal** prepn. comprise an active ingredient carrier layer, a backing layer, and an adhesive layer. The carrier layer contains the active ingredient melt-blended with a thermoplastic matrix capable of controlling the drug release and the adhesive layer is also capable of controlling the rate at which the drug is released from carrier layer to the skin or mucosa. For example, Pebax 4033 resin was melt-blended with nicotine and extruded into pellets, which were made into a film. Disks from a film were affixed to Saran/Hytrel occlusive film disks with a Gelva 737 acrylic pressure-sensitive adhesive. The opposite side of the disk was coated with a Gelva 737 and covered with a release liner. Release of the nicotine from the patch was in vitro tested and compared with that of com. available Nicotinell-TTS 20.

IC ICM A61K009-70

CC 63-6 (Pharmaceuticals)

ST **transdermal** patch controlled release polymer adhesive;

nicotine controlled release **transdermal** patch

IT Polyoxyalkylenes, biological studies

RL: BIOL (Biological study)

(silicates, **transdermal** patches contg., controlled-release)

IT Urethane polymers, biological studies

RL: BIOL (Biological study)

(**transdermal** patches contg., as thermoplastic drug carriers)

IT Antibiotics

Anticonvulsants and Antiepileptics

Antidepressants
 Bactericides, Disinfectants, and Antiseptics
 Hypnotics and Sedatives
 Neoplasm inhibitors
 Psychotropics
 Surfactants
 Tranquilizers and Neuroleptics
 Aldehydes, biological studies

Essential oils

Esters, biological studies
 Hydrocarbons, biological studies
 Ketones, biological studies
 Siloxanes and Silicones, biological studies
 Steroids, biological studies

Terpenes and Terpenoids, biological studies

RL: BIOL (Biological study)
 (**transdermal** patches contg., controlled-release)

- IT Alcohols, biological studies
 RL: BIOL (Biological study)
 (C6-12, **transdermal** patches contg., controlled-release)
- IT Carboxylic acids, biological studies
 RL: BIOL (Biological study)
 (aliph., **transdermal** patches contg., controlled-release)
- IT Sulfoxides
 RL: BIOL (Biological study)
 (alkyl, **transdermal** patches contg., controlled-release)
- IT Rubber, synthetic
 RL: BIOL (Biological study)
 (azacyclotridecanone-polytetramethylene glycol, block, **nicotine**
transdermal patches contg.)
- IT Analgesics
 (narcotic, **transdermal** patches contg., controlled-release)
- IT Hydrocarbons, biological studies
 RL: BIOL (Biological study)
 (nitro, **transdermal** patches contg., controlled-release)
- IT Rubber, synthetic
 RL: BIOL (Biological study)
 (poly(butylene terephthalate)-polyether, block, **nicotine**
transdermal patches contg.)
- IT Polyethers, biological studies
 RL: BIOL (Biological study)
 (polyamide-, block, **transdermal** patches contg., as
 thermoplastic drug carriers)
- IT Polyamides, biological studies
 RL: BIOL (Biological study)
 (polyether-, block, **transdermal** patches contg., as
 thermoplastic drug carriers)
- IT Pharmaceutical dosage forms
 (**transdermal**, controlled-release, rate-controlling polymer
 matrix and adhesive layer in)
- IT 28516-43-0, Surlyn 1702 151615-82-6, Duro-Tak 36-6172 151616-13-6,
 Morstik 118
 RL: BIOL (Biological study)
 (**nicotine transdermal** patches contg.)
- IT 115452-93-2, Gelva 737
 RL: BIOL (Biological study)
 (**nicotine transdermal** patches contg., as adhesive)
- IT 9010-77-9, Ethylene-acrylic acid copolymer 24968-12-5D, Polybutylene
 terephthalate, reaction products with polyether prepolymers 25053-53-6,
 Ethylene-methacrylic acid copolymer 26062-94-2D, Polybutylene

terephthalate, reaction products with polyether prepolymers 78390-28-0D,
reaction products with polyether prepolymers

RL: BIOL (Biological study)

(transdermal patches contg., as thermoplastic drug carrier)

IT 50-06-6, biological studies 50-28-2, Estradiol, biological studies
50-47-5, Desipramine 50-48-6 50-49-7, Imipramine 50-78-2, Aspirin
51-12-7, Nialamide 54-11-5, Nicotine 57-27-2,
Morphine, biological studies 57-41-0, Phenytoin 57-42-1 57-83-0,
Progestin, biological studies 58-08-2, Caffeine, biological studies
58-22-0, Testosterone 59-63-2, Isocarboxazide 60-35-5D, Acetamide,
N,N-dialkyl derivs. 60-54-8, Tetracycline 61-33-6, biological studies
62-67-9 69-72-7D, Salicylic acid, derivs. 76-23-3 76-57-3, Codeine
77-41-8, Methsuximide 80-92-2, Pregnanediol 103-90-2, Acetaminophen
298-46-4, Carbamazepine 439-14-5, Diazepam 521-35-7D, Cannabinol,
derivs. 1227-61-8, Mefexamide 3930-19-6, Rufocromomycin 4268-36-4,
Tybamate 5118-29-6, Melitracen 7206-76-0, 2-Ethyl-2-phenylmalonamide
18883-66-4, Streptozocin 22199-08-2, Silver sulfadiazine 22733-60-4
28546-58-9, Uldazepam 28981-97-7, Alprazolam 34262-84-5, Mesocarb
34914-25-5, Bentiocide 37753-10-9, Sufosfamide 61318-90-9, Sulconazole
84031-17-4, Metaclozepam

RL: BIOL (Biological study)

(transdermal patches contg., controlled-release)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 24937-78-8,
Ethylene-vinyl acetate copolymer

RL: BIOL (Biological study)

(transdermal patches contg., in controlled-release layer)

L9 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1992:135528 HCAPLUS

DOCUMENT NUMBER: 116:135528

TITLE: Performance-oriented packaging standards; changes to
classification, hazard communication, packaging and
handling requirements based on UN standards and agency
initiative

CORPORATE SOURCE: United States Dept. of Transportation, Washington, DC,
20590-0001, USA

SOURCE: Fed. Regist. (1990), 55(246), 52402-729, 21 Dec 1990
CODEN: FEREAC; ISSN: 0097-6326

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The hazardous materials regulations under the Federal Hazardous Materials
Transportation Act are revised based on the United Nations recommendations
on the transport of dangerous goods. The regulations cover the
classification of materials, packaging requirements, and package marking,
labeling, and shipping documentation, as well as transportation modes and
handling, and incident reporting. Performance-oriented stds. are adopted
for packaging for bulk and nonbulk transportation, and SI units of
measurement generally replace US customary units. Hazardous material
descriptions and proper shipping names are tabulated together with hazard
class, identification nos., packing group, label required, special
provisions, packaging authorizations, quantity limitations, and vessel
stowage requirements.

CC 59-6 (Air Pollution and Industrial Hygiene)

IT Adhesives

Alcoholic beverages

Ammunition

Antifreeze substances

Bactericides, Disinfectants, and Antiseptics

Batteries, primary

Blasting gelatin

Bombs (explosives)
Carbon paper
Cartridges
Castor bean
Coating materials
Corrosive substances
Cotton
Creosote
Detonators
Dyes
Dynamite
Electric fuses
Exothermic materials
Explosives
Flavoring materials
Flue dust
Fuel cells
Fuel oil
Fuels, diesel
Fuels, jet aircraft
Fusel oil
Fuses, explosives
Gas oils
Hay
Herbicides
Igniters and Lighters
Insecticides
Lacrimators
Magnetic substances
Matches
Oxidizing agents
 Perfumes
Pesticides
Petroleum products
Pharmaceuticals
Photoelectric devices
Poisons
Primers, explosive
Projectiles
Pyrophoric substances
Pyrotechnic compositions
Radioactive substances
Refrigerating apparatus
Rockets
Shale oils
Solvent naphtha
Sprays
Straw
Textiles
Thermoelectric devices
Torpedoes (weapons)
Turpentine
Wood preservatives
 (packaging and transport of, stds. for)

IT Alcohols, miscellaneous
Aldehydes, miscellaneous
Alkali metal alloys, base
Alkali metals, miscellaneous
Alkaline earth alloys, base
Alkaline earth metals

Alkaloids, miscellaneous
Amines, miscellaneous
Arsenates
Arsenites
Asbestos
Asphalt
Bases, miscellaneous
Charcoal
Coal
Coke
Cyanates
Cyanides, miscellaneous
Fibers
Fluorides, miscellaneous
Gasoline
Helium-group gases, miscellaneous
Hydrides
Hypochlorites
Kerosine
Ketones, uses
Ligroine
Metals, miscellaneous
Naphtha
Natural gas
Natural gas condensates
Nitrates, miscellaneous
Nitrites
Perchlorates
Permanganates
Peroxides, uses
Petroleum
Petroleum gases, liquefied
Polyamines
Polyesters, miscellaneous
Rosin oil
Selenates
Selenites
Sulfonic acids, miscellaneous
Tar

Terpenes and Terpenoids, miscellaneous

Thiols, uses

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(packaging and transport of, stds. for)

IT **Essential oils**

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(camphor, packaging and transport of, stds. for)

IT **Essential oils**

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)
(pine, packaging and transport of, stds. for)

IT 50-00-0, Formaldehyde, miscellaneous 54-11-5, Nicotine

54-11-5D, Nicotine, compds. 55-63-0, Nitroglycerin
55-68-5, Phenylmercuric nitrate 56-18-8, 3,3'-Iminodipropylamine
56-23-5, miscellaneous 56-38-2, Parathion 57-06-7, Allyl
isothiocyanate 57-14-7 57-24-9D, Strychnine, salts 60-00-4, EDTA,
miscellaneous 60-24-2 60-29-7, Diethyl ether, miscellaneous 60-34-4,
Methylhydrazine 60-57-1, Dieldrin 62-38-4, Phenylmercuric acetate
62-53-3, Aniline, miscellaneous 62-74-8, Sodium fluoroacetate 64-17-5,

Ethanol, miscellaneous 64-18-6, Formic acid, miscellaneous 64-18-6D,
 Formic acid, chloro derivs. 64-19-7, Acetic acid, miscellaneous
 64-67-5, Diethyl sulfate 66-25-1, Hexaldehyde 67-56-1, Methanol,
 miscellaneous 67-63-0, Isopropanol, miscellaneous 67-64-1, Acetone,
 miscellaneous 67-66-3, Chloroform, miscellaneous 68-11-1, Thioglycolic
 acid, miscellaneous 68-12-2, N,N-Dimethylformamide, miscellaneous
 70-11-1, Phenacyl bromide 70-30-4, Hexachlorophene 71-23-8,
 n-Propanol, miscellaneous 71-41-0, 1-Pentanol, miscellaneous 71-43-2,
 Benzene, miscellaneous 71-55-6, 1,1,1-Trichloroethane 74-82-8,
 Methane, miscellaneous 74-83-9, miscellaneous 74-84-0, Ethane,
 miscellaneous 74-85-1, Ethylene, miscellaneous 74-86-2, Acetylene,
 miscellaneous 74-87-3, Methyl chloride, miscellaneous 74-88-4, Methyl
 iodide, miscellaneous 74-89-5, Methylamine, miscellaneous 74-90-8,
 Hydrogen cyanide, miscellaneous 74-93-1, Methyl mercaptan, miscellaneous
 74-95-3, Dibromomethane 74-96-4, Ethyl bromide 74-97-5,
 Bromochloromethane 74-98-6, Propane, miscellaneous 75-00-3, Ethyl
 chloride 75-01-4, miscellaneous 75-02-5, Vinyl fluoride 75-04-7,
 Ethylamine, miscellaneous 75-05-8, Methyl cyanide, miscellaneous
 75-07-0, Acetaldehyde, miscellaneous 75-08-1, Ethyl mercaptan 75-09-2,
 Dichloromethane, miscellaneous 75-15-0, Carbon disulfide, miscellaneous
 75-16-1, Methyl magnesium bromide 75-18-3, Dimethyl sulfide 75-19-4,
 Cyclopropane 75-20-7, Calcium carbide 75-21-8, Ethylene oxide,
 miscellaneous 75-25-2, Bromoform 75-26-3, 2-Bromopropane 75-28-5,
 Isobutane 75-28-5D, Isobutane, mixts. 75-29-6, 2-Chloropropane
 75-31-0, Isopropylamine, miscellaneous 75-33-2, Isopropyl mercaptan
 75-34-3, 1,1-Dichloroethane 75-35-4, miscellaneous 75-36-5, Acetyl
 chloride 75-38-7, 1,1-Difluoroethylene 75-39-8, Acetaldehyde ammonia
 75-43-4, Dichloromonofluoromethane 75-44-5, Phosgene 75-45-6,
 Chlorodifluoromethane 75-46-7, Trifluoromethane 75-50-3,
 Trimethylamine, miscellaneous 75-52-5, Nitromethane, miscellaneous
 75-54-7, Methylchlorosilane 75-55-8, Propylenimine 75-56-9,
 Propylene oxide, miscellaneous 75-59-2, Tetramethylammonium hydroxide
 75-60-5, Cacodylic acid 75-61-6, Dibromodifluoromethane 75-63-8
 75-71-8, Dichlorodifluoromethane 75-72-9, Chlorotrifluoromethane
 75-73-0, Tetrafluoromethane 75-76-3, Tetramethylsilane 75-77-4,
 Trimethylchlorosilane, miscellaneous 75-78-5, Dimethyldichlorosilane
 75-79-6, Methyltrichlorosilane 75-83-2 75-86-5, Acetone cyanohydrin
 75-87-6, Chloral 75-91-2, tert-Butyl hydroperoxide 75-94-5,
 Vinyltrichlorosilane 76-01-7, Pentachloroethane 76-02-8,
 Trichloroacetyl chloride 76-03-9, properties 76-05-1, Trifluoroacetic
 acid, miscellaneous 76-06-2, Chloropicrin 76-06-2D, Chloropicrin,
 mixts. 76-15-3 76-16-4, Hexafluoroethane 76-19-7, Octafluoropropane
 76-22-2, Camphor 77-47-4, Hexachlorocyclopentadiene 77-73-6 77-78-1,
 Dimethyl sulfate 78-00-2, Tetraethyl lead 78-10-4, Tetraethyl silicate
 78-62-6, Dimethyldiethoxysilane 78-67-1, Azodiisobutyronitrile
 78-76-2, 2-Bromobutane 78-78-4, Isopentane 78-79-5, Isoprene,
 miscellaneous 78-81-9, Isobutylamine 78-82-0, Isobutyronitrile
 78-83-1, Isobutanol, miscellaneous 78-84-2, Isobutyraldehyde 78-85-3,
 Methacrylaldehyde 78-87-5, Propylene dichloride 78-89-7, Propylene
 chlorohydrin 78-90-0, 1,2-Propylenediamine 78-93-3, 2-Butanone,
 miscellaneous 78-94-4, Methyl vinyl ketone, miscellaneous 78-95-5,
 Monochloroacetone 79-01-6, Trichloroethylene, miscellaneous 79-03-8,
 Propionyl chloride 79-04-9, Chloroacetyl chloride 79-06-1, Acrylamide,
 miscellaneous 79-08-3, Bromoacetic acid 79-09-4, Propionic acid,
 miscellaneous 79-10-7, 2-Propenoic acid, miscellaneous 79-11-8,
 Chloroacetic acid, miscellaneous 79-20-9, Methyl acetate 79-21-0,
 Peroxyacetic acid 79-22-1 79-24-3, Nitroethane 79-29-8,
 2,3-Dimethylbutane 79-30-1, Isobutyryl chloride 79-31-2, Isobutyric
 acid 79-36-7, Dichloroacetyl chloride 79-38-9 79-41-4, miscellaneous
 79-42-5 79-43-6, Dichloroacetic acid, miscellaneous 79-44-7,

Dimethylcarbamoyl chloride 80-10-4, Diphenyldichlorosilane 80-15-9, Cumene hydroperoxide 80-17-1, Benzene sulfohydrazide 80-47-7, p-Menthane hydroperoxide 80-51-3, Diphenyloxide-4,4'-disulfohydrazide 80-56-8, .alpha.-Pinene 80-62-6 81-15-2 82-71-3 85-44-9, 1,3-Isobenzofurandione 86-50-0, Azinphos methyl 87-68-3, Hexachlorobutadiene 87-90-1 88-17-5, 2-Trifluoromethylaniline 88-72-2, o-Nitrotoluene 88-73-3, o-Chloronitrobenzene 88-74-4, o-Nitroaniline 88-75-5, o-Nitrophenol 88-89-1 89-58-7, p-Nitroxylenes 91-17-8, Decahydronaphthalene 91-20-3, Naphthalene, miscellaneous 91-20-3D, Naphthalene, diozonide derivs. 91-22-5, Quinoline, miscellaneous 91-59-8, .beta.-Naphthylamine 91-66-7, N,N-Diethylaniline 92-52-4D, Biphenyl, chloro derivs. 92-52-4D, Biphenyl, halo derivs. 92-59-1, N-Ethyl-N-benzylaniline 92-87-5, Benzidine 93-58-3, Methyl benzoate 94-17-7, p-Chlorobenzoyl peroxide 94-36-0, Benzoyl peroxide, miscellaneous 95-48-7, miscellaneous 95-50-1, o-Dichlorobenzene 95-54-5, o-Phenylenediamine, miscellaneous 95-55-6, o-Aminophenol 95-80-7 95-85-2, 2-Amino-4-chlorophenol 96-12-8, Dibromochloropropane 96-22-0, Diethyl ketone 96-23-1 96-24-2, Glycerol .alpha.-monochlorohydrin 96-32-2, Methyl bromoacetate 96-33-3 96-34-4, Methyl chloroacetate 96-37-7, Methyl cyclopentane 96-41-3, Cyclopentanol 97-62-1, Ethyl isobutyrate 97-63-2 97-64-3, Ethyl lactate 97-72-3, Isobutyric anhydride 97-85-8, Isobutyl isobutyrate 97-86-9 97-88-1 97-95-0 97-96-1, 2-Ethylbutyraldehyde 98-00-0, Furfuryl alcohol 98-01-1, Furfural, miscellaneous 98-07-7, Benzotrichloride 98-08-8, Benzotrifluoride 98-09-9, Benzene sulfonyl chloride 98-12-4, Cyclohexyltrichlorosilane 98-13-5, Phenyltrichlorosilane 98-16-8, 3-Trifluoromethylaniline 98-82-8, Isopropylbenzene 98-83-9, miscellaneous 98-85-1, .alpha.-Methylbenzyl alcohol 98-87-3, Benzylidene chloride 98-88-4, Benzoyl chloride 98-94-2 98-95-3, Nitrobenzene, miscellaneous 99-08-1, m-Nitrotoluene 99-09-2, m-Nitroaniline 99-35-4, Trinitrobenzene 99-99-0, p-Nitrotoluene 100-00-5 100-01-6, p-Nitroaniline, miscellaneous 100-02-7, p-Nitrophenol, miscellaneous 100-17-4 100-34-5, Benzene diazonium chloride 100-36-7, N,N-Diethylethylenediamine 100-37-8, Diethylaminoethanol

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IT 1187-93-5, Perfluoromethyl vinyl ether 1299-86-1, Aluminum carbide 1300-64-7, Anisoyl chloride 1300-71-6, Xylenol 1300-73-8D, derivs. 1303-28-2, Arsenic pentoxide 1303-33-9, Arsenic trisulfide 1303-33-9D, Arsenic sulfide, mixt. with chlorates 1304-28-5, Barium oxide, miscellaneous 1304-29-6, Barium peroxide 1305-78-8, Calcium oxide, miscellaneous 1305-79-9, Calcium peroxide 1305-99-3, Calcium phosphide 1309-60-0, Lead dioxide 1310-58-3, Potassium hydroxide, miscellaneous 1310-65-2, Lithium hydroxide 1310-73-2, Sodium hydroxide, miscellaneous 1310-82-3, Rubidium hydroxide 1312-73-8, Potassium sulfide 1313-60-6, Sodium peroxide 1313-82-2, Sodium sulfide, miscellaneous 1314-18-7, Strontium peroxide 1314-22-3, Zinc peroxide 1314-24-5, Phosphorus trioxide 1314-34-7, Vanadium trioxide 1314-56-3, Phosphorus pentoxide, miscellaneous 1314-62-1, Vanadium pentoxide, miscellaneous 1314-80-3, Phosphorus sulfide (P2S5) 1314-84-7, Zinc phosphide 1314-85-8, Phosphorus sesquisulfide 1319-77-3, Cresylic acid 1320-37-2, Dichlorotetrafluoroethane 1321-10-4, Chlorocresol 1321-31-9, Phenetidine 1327-53-3, Arsenic trioxide 1330-20-7, Xylene, miscellaneous 1330-45-6, Chlorotrifluoroethane 1330-78-5, Tricresyl phosphate 1331-22-2, Methyl cyclohexanone 1332-12-3, Fulminating gold 1332-37-2, Iron oxide, properties 1333-39-7, Phenolsulfonic acid 1333-41-1, Picoline 1333-74-0, Hydrogen, miscellaneous 1333-82-0, Chromium trioxide 1333-83-1, Sodium hydrogen fluoride 1335-26-8,

Magnesium peroxide 1335-31-5, Mercury oxycyanide 1335-85-9,
 Dinitro-o-cresol 1336-21-6, Ammonium hydroxide 1337-81-1 1338-23-4,
 Methyl ethyl ketone peroxide 1341-24-8, Chloroacetophenone 1341-49-7,
 Ammonium hydrogen fluoride 1344-40-7, Lead phosphite, dibasic
 1344-67-8, Copper chloride 1498-40-4, Ethyl phosphonous dichloride
 1498-51-7, Ethyl phosphorodichloridate 1569-69-3, Cyclohexyl mercaptan
 1609-86-5, tert-Butyl isocyanate 1623-15-0 1623-24-1, Isopropyl acid
 phosphate 1634-04-4, Methyl-tert-butyl ether 1693-71-6, Triallyl
 borate 1705-60-8, 2,2-Di(4,4-di-tert-butylperoxycyclohexyl)propane
 1712-64-7, Isopropyl nitrate 1719-53-5, Diethyldichlorosilane
 1737-93-5, 3,5-Dichloro-2,4,6-trifluoropyridine 1789-58-8,
 Ethyldichlorosilane 1795-48-8, Isopropyl isocyanate 1838-59-1, Allyl
 formate 1873-29-6, Isobutyl isocyanate 1885-14-9, Phenylchloroformate
 1947-27-9, Arsenic trichloride 2050-92-2, Di-n-amylamine 2094-98-6,
 1,1'-Azodi(hexahydrobenzonitrile) 2144-45-8, Dibenzyl peroxydicarbonate
 2155-71-7 2167-23-9, 2,2-Di(tert-butylperoxy)butane 2217-06-3,
 Dipicryl sulfide 2243-94-9, 1,3,5-Trinitronaphthalene 2244-21-5,
 Potassium dichloroisocyanurate 2294-47-5, p-Diazidobenzene 2312-76-7
 2338-12-7, 5-Nitrobenzotriazole 2487-90-3, Trimethoxysilane 2508-19-2,
 Trinitrobenzenesulfonic acid 2524-03-0, Dimethyl chlorothiophosphate
 2524-04-1, Diethylthiophosphoryl chloride 2549-51-1, Vinyl chloroacetate
 2551-62-4, Sulfur hexafluoride 2567-83-1, Tetraethylammonium perchlorate
 2657-00-3, Sodium 2-diazo-1-naphthol-5-sulfonate 2691-41-0,
 Cyclotetramethylenetetranitramine 2696-92-6, Nitrosyl chloride
 2699-79-8, Sulfuryl fluoride 2782-57-2, Dichloroisocyanuric acid
 2782-57-2D, Dichloroisocyanuric acid, salts 2820-51-1, **Nicotine**
 hydrochloride 2825-15-2 2855-13-2, Isophoronediamine 2867-47-2,
 Dimethylaminoethyl methacrylate 2893-78-9, Sodium dichloroisocyanurate
 2937-50-0, Allyl chloroformate 2941-64-2, Ethyl chlorothioformate
 2980-64-5 3025-88-5, 2,5-Dimethyl-2,5-dihydroperoxy hexane 3031-74-1,
 Ethyl hydroperoxide 3032-55-1 3054-95-3, 3,3-Diethoxypropene
 3087-37-4, Tetrapropylorthotitanate 3129-90-6, Isothiocyanic acid
 3129-91-7, Dicyclohexylammonium nitrite 3132-64-7, Epibromohydrin
 3165-93-3, 4-Chloro-o-toluidine hydrochloride 3173-53-3, Cyclohexyl
 isocyanate 3179-56-4, Acetyl cyclohexanesulfonyl peroxide 3188-13-4,
 Chloromethyl ethyl ether 3248-28-0, Dipropionyl peroxide 3268-49-3
 3275-73-8, **Nicotine** tartrate 3282-30-2, Trimethylacetyl
 chloride 3497-00-5, Phenyl phosphorus thiodichloride 3689-24-5
 3724-65-0, Crotonic acid 3811-04-9, Potassium chlorate 3926-62-3,
 Sodium chloroacetate 3982-91-0, Thiophosphoryl chloride 4016-11-9,
 1,2-Epoxy-3-ethoxypropane 4098-71-9 4109-96-0, Dichlorosilane
 4170-30-3, Crotonaldehyde 4300-97-4 4316-42-1, N-n-Butylimidazole
 4419-11-8, 2,2'-Azodi(2,4-dimethylvaleronitrile) 4421-50-5 4435-53-4,
 Butoxyl 4452-58-8, Sodium percarbonate 4472-06-4, Carbonazidodithioic
 acid 4484-72-4, Dodecyltrichlorosilane 4528-34-1 4547-70-0
 4591-46-2 4682-03-5, Diazodinitrophenol 4795-29-3,
 Tetrahydrofurfurylamine 4904-61-4, 1,5,9-Cyclododecatriene 5283-66-9,
 Octyltrichlorosilane 5283-67-0, Nonyltrichlorosilane 5329-14-6,
 Sulfamic acid 5419-55-6, Triisopropyl borate 5610-59-3, Silver
 fulminate 5637-83-2, Cyanuric triazide 5653-21-4 5894-60-0,
 Hexadecyltrichlorosilane 5970-32-1, Mercury salicylate 6023-29-6
 6275-02-1 6423-43-4 6427-21-0, Methoxymethyl isocyanate 6484-52-2,
 Nitric acid ammonium salt, properties 6484-52-2D, Ammonium nitrate,
 mixts. with fuel oils 6505-86-8, **Nicotine** sulfate 6659-60-5,
 1,2,4-Butanetriol trinitrate 6842-15-5, Propylene tetramer 7304-92-9
 7332-16-3, Inositol hexanitrate 7429-90-5, Aluminum, miscellaneous
 7429-90-5D, Aluminum, alkyl derivs. 7439-90-9, Krypton, miscellaneous
 7439-92-1D, Lead, compds. 7439-93-2, Lithium, miscellaneous
 7439-93-2D, Lithium, alkyl derivs. 7439-95-4, Magnesium, miscellaneous
 7439-95-4D, Magnesium, alkyl derivs. 7439-97-6, Mercury, miscellaneous

7439-97-6D, Mercury, compds. 7440-01-9, Neon, miscellaneous 7440-09-7, Potassium, miscellaneous 7440-17-7, Rubidium, miscellaneous 7440-21-3, Silicon, miscellaneous 7440-23-5, Sodium, miscellaneous 7440-28-0D, Thallium, compds. 7440-29-1, Thorium, miscellaneous 7440-31-5D, Tin, org. compds. 7440-32-6, Titanium, properties 7440-36-0, Antimony, miscellaneous 7440-36-0D, Antimony, inorg. and org. compds. 7440-37-1, Argon, miscellaneous 7440-38-2, Arsenic, miscellaneous 7440-39-3, Barium, miscellaneous 7440-39-3D, Barium, alloys 7440-39-3D, Barium, compds. 7440-41-7, Beryllium, miscellaneous 7440-41-7D, Beryllium, compds. 7440-43-9D, Cadmium, compds. 7440-44-0, Carbon, miscellaneous 7440-45-1, Cerium, miscellaneous 7440-46-2, Cesium, miscellaneous 7440-55-3, Gallium, miscellaneous 7440-58-6, Hafnium, miscellaneous 7440-59-7, Helium, miscellaneous 7440-61-1, Uranium, miscellaneous 7440-63-3, Xenon, miscellaneous 7440-66-6, Zinc, miscellaneous 7440-67-7, Zirconium, miscellaneous 7440-70-2, Calcium, miscellaneous 7440-70-2D, Calcium, alloys 7446-09-5, Sulfur dioxide, miscellaneous 7446-11-9, Sulfur trioxide, miscellaneous 7446-14-2, Lead sulfate 7446-18-6, Thallium sulfate 7446-70-0, Aluminum chloride (AlCl₃), miscellaneous 7487-94-7, Mercuric chloride, miscellaneous 7488-56-4, Selenium disulfide 7521-80-4, Butyltrichlorosilane 7550-45-0, Titanium tetrachloride, miscellaneous 7570-26-5, 1,2-Dinitroethane 7572-29-4, Dichloroacetylene 7578-36-1 7580-67-8, Lithium hydride 7601-89-0, Sodium perchlorate 7601-90-3, Perchloric acid, miscellaneous 7616-94-6, Perchloryl fluoride 7631-89-2, Sodium arsenate 7631-99-4, Sodium nitrate, miscellaneous 7632-00-0, Sodium nitrite 7632-51-1, Vanadium tetrachloride 7637-07-2, Boron trifluoride, miscellaneous 7645-25-2, Lead arsenate 7646-69-7, Sodium hydride 7646-78-8, Stannic chloride, miscellaneous 7646-85-7, Zinc chloride, miscellaneous 7646-93-7, Potassium hydrogen sulfate 7647-01-0, Hydrogen chloride, miscellaneous 7647-18-9, Antimony pentachloride 7647-19-0, Phosphorus pentafluoride 7664-38-2, Phosphoric acid, miscellaneous
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IT 13597-99-4, Beryllium nitrate 13598-36-2, Phosphonic acid 13637-63-3, Chlorine pentafluoride 13637-76-8, Lead perchlorate 13718-59-7 13746-89-9, Zirconium nitrate 13762-51-1, Potassium borohydride 13766-44-4, Mercury sulfate 13769-43-2, Potassium metavanadate 13770-96-2, Sodium aluminum hydride 13774-25-9 13779-41-4, Difluorophosphoric acid 13780-03-5, Calcium bisulfite 13823-29-5, Thorium nitrate 13840-33-0, Lithium hypochlorite 13840-33-0D, Lithium hypochlorite, mixts. 13843-59-9, Ammonium bromate 13863-88-2, Silver azide 13967-90-3, Barium bromate 13973-87-0, Bromine azide 13973-88-1, Chlorine azide 13987-01-4, Tripropylene 14014-86-9 14019-91-1, Calcium selenate 14293-73-3 14448-38-5, Hyponitrous acid 14519-07-4, Zinc bromate 14519-17-6, Magnesium bromate 14546-44-2, Hydrazine azide 14567-73-8, Tremolite 14644-61-2, Zirconium sulfate 14666-78-5, Diethylperoxydicarbonate 14674-72-7, Calcium chlorite 14696-82-3, Iodine azide (I(N₃)) 14977-61-8 15195-06-9 15245-44-0, Lead trinitroresorcinat 15347-57-6, Lead acetate 15457-98-4 15512-36-4, Calcium dithionite 15545-97-8, 2,2'-Azodi(2,4-dimethyl-4-methoxyvaleronitile) 15598-34-2, Pyridine perchlorate 15718-71-5, Ethylenediamine diperchlorate 15825-70-4, Mannitol hexanitrate 15875-44-2, Methylamine perchlorate 16215-49-9, Di-n-butyl peroxydicarbonate 16229-43-9, Vanadyl sulfate 16339-86-9 16646-35-8 16721-80-5, Sodium hydrosulfide 16753-36-9, Copper acetylde 16853-85-3, Lithium aluminum hydride 16871-71-9, Zinc fluorosilicate 16871-90-2, Potassium fluorosilicate 16872-11-0 16893-85-9, Sodium fluorosilicate 16901-76-1, Thallium nitrate 16919-19-0, Ammonium fluorosilicate 16940-66-2, Sodium borohydride 16940-81-1,

Hexafluorophosphoric acid 16941-12-1, Chloroplatinic acid 16949-15-8,
 Lithium borohydride 16949-65-8, Magnesium fluorosilicate 16961-83-4,
 Fluorosilicic acid 16962-07-5, Aluminum borohydride 17014-71-0,
 Potassium peroxide 17068-78-9, Anthophyllite 17462-58-7, sec-Butyl
 chloroformate 17639-93-9, Methyl-2-chloropropionate 17687-37-5, Urea
 nitrate 17702-41-9, Decaborane 17861-62-0 18130-44-4, Titanium
 sulfate 18414-36-3 18810-58-7, Barium azide 19159-68-3 19287-45-7,
 Diborane 19287-45-7D, Diborane, mixts. 19624-22-7, Pentaborane
 20062-22-0 20236-55-9, Barium styphnate 20600-96-8 20816-12-0,
 Osmium tetroxide 20820-44-4 20859-73-8, Aluminum phosphide
 21351-79-1, Cesium hydroxide (Cs(OH)) 21569-01-7 21723-86-4
 21985-87-5, Pentanitroaniline 22128-62-7, Chloromethylchloroformate
 22750-93-2, Ethyl perchlorate 22751-24-2 22826-61-5 23414-72-4, Zinc
 permanganate 23745-86-0, Potassium fluoroacetate 24468-13-1,
 2-Ethylhexylchloroformate 24884-69-3 25013-15-4, Vinyl toluene
 25109-57-3 25134-21-8 25136-55-4, Dimethyldioxane 25154-42-1,
 Chlorobutane 25154-54-5, Dinitrobenzene 25155-15-1, Cymene
 25167-20-8, Tetrabromoethane 25167-67-3, Butylene 25167-70-8,
 Diisobutylene 25167-80-0, Chlorophenol 25168-05-2, Chlorotoluene
 25265-68-3, Methyltetrahydrofuran 25321-14-6, Dinitrotoluene
 25322-01-4, Nitropropane 25322-20-7, Tetrachloroethane 25323-30-2,
 Dichloroethylene 25339-56-4, Heptene 25340-17-4, Diethylbenzene
 25377-72-4, n-Amylene 25496-08-6, Fluorotoluene 25497-28-3,
 Difluoroethane 25497-29-4, Chlorodifluoroethane 25513-64-8
 25550-53-2 25550-55-4, Dinitrosobenzene 25550-58-7, Dinitrophenol
 25550-58-7D, Dinitrophenol, salts 25567-67-3, Chlorodinitrobenzene
 25567-68-4, Chloronitrotoluene 25639-42-3, Methylcyclohexanol
 25721-38-4, Lead picrate 25917-35-5, Hexanol 26134-62-3, Lithium
 nitride 26140-60-3D, Terphenyl, halo derivs. 26249-12-7,
 Dibromobenzene 26471-56-7, Dinitroaniline 26471-62-5, Toluene
 diisocyanate 26506-47-8, Copper chlorate 26571-79-9 26618-70-2
 26628-22-8, Sodium azide 26638-19-7, Dichloropropane 26645-10-3
 26760-64-5, Isopentene 26762-93-6 26914-02-3, Iodopropane
 26915-12-8, Toluidine 26952-23-8, Dichloropropene 26952-42-1,
 Trinitroaniline 27134-26-5, Chloroaniline 27134-27-6, Dichloroaniline
 27137-85-5, Dichlorophenyltrichlorosilane 27152-57-4 27176-87-0,
 Dodecylbenzenesulfonic acid 27195-67-1, Dimethylcyclohexane 27215-10-7
 27236-46-0, Isohexene 27254-36-0, Nitronaphthalene 27458-20-4,
 Butyltoluene 27978-54-7, Hydrazine perchlorate 27986-95-4 27987-06-0
 , Trifluoroethane 28260-61-9, Trinitrochlorobenzene 28300-74-5,
 Antimony potassium tartrate 28324-52-9, Pinane hydroperoxide
 28479-22-3 28653-16-9 28679-16-5, Trimethylhexamethylenediisocyanate
 28805-86-9, Butylphenol 29191-52-4, Anisidine 29306-57-8 29790-52-1,
Nicotine salicylate 29903-04-6 29965-97-7, Cyclooctadiene
 30236-29-4, Sucrose octanitate 30525-89-4, Paraformaldehyde
 30553-04-9, Naphthylthiourea 30586-10-8, Dichloropentane 30586-18-6,
 Pentamethylheptane 31058-64-7 31212-28-9, Nitrobenzenesulfonic acid
 33453-96-2 33864-17-4 34216-34-7, Trimethylcyclohexylamine
 35296-72-1, Butanol 35860-50-5, Trinitrobenzoic acid 35860-51-6,
 Dinitroresorcinol 35884-77-6, Xylol bromide 36472-34-1, Chloropropene
 37020-93-2, Mercury cyanide (Hg(CN)) 37187-22-7, Acetyl acetone peroxide
 37206-20-5, Methyl isobutyl ketone peroxide 37273-91-9, Metaldehyde
 37320-91-5, Mercury iodide 37341-05-2 37368-10-8, Aluminum vanadium
 oxide 38139-71-8, Bromide chloride 38232-63-2, Mercurous azide
 38483-28-2, Methylene glycol dinitrate 39377-49-6, Copper cyanide
 39377-56-5, Lead sulfide 39404-03-0, Magnesium silicide 39409-64-8,
 TVOPA 39432-81-0 39455-80-6, Ammonium sodium vanadium oxide
 39990-99-3, Lithium acetylde ethylenediamine complex 40058-87-5,
 Isopropyl-2-chloropropionate 41195-19-1 41587-36-4, Chloronitroaniline
 42296-74-2, Hexadiene 43133-95-5, Methylpentane 50815-73-1

50874-93-6 51006-59-8 51023-22-4, Trichlorobutene 51064-12-1
 51312-23-3, Mercury bromide 51317-24-9, Lead nitroresorcinate
 51325-42-9, Copper selenite 51845-86-4, Ethyl borate 52181-51-8
 53014-37-2, Tetranitroaniline 53408-91-6, Mercury thiocyanate
 53422-49-4 53569-62-3 53839-08-0 53906-68-6 54141-09-2,
 1,4,-Butynediol 54413-15-9, Tritonal 54727-89-8 54958-71-3
 55510-04-8, Dinitroglycoluril 55810-17-8 56929-36-3 56960-91-9
 57607-37-1, Octolite 58164-88-8, Antimony lactate 58499-37-9
 58933-55-4

RL: ADV (Adverse effect, including toxicity); PEP (Physical, engineering
 or chemical process); BIOL (Biological study); PROC (Process)
 (packaging and transport of, stds. for)

L9 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1985:218599 HCAPLUS

DOCUMENT NUMBER: 102:218599

TITLE: Comparison of roasted tobacco volatiles with tobacco
essential oil and cigarette smoke
 condensate

AUTHOR(S): Matsukura, Masao; Takahashi, Kyoko; Kawamoto, Masae;
 Ishiguro, Shigeo; Matsushita, Hajime

CORPORATE SOURCE: Cent. Res. Inst., Japan Tobacco and Salt Public Corp.,
 Yokohama, 227, Japan

SOURCE: Agric. Biol. Chem. (1985), 49(3), 711-18

CODEN: ABCHA6; ISSN: 0002-1369

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The compn. of roasted tobacco volatiles was compared with those of tobacco
essential oil and cigarette smoke condensate. Tobacco
essential oil gave a refreshing, sweet aroma in addn. to
 a tobacco-like aroma. These aromas might be attributable to terpenoid
 compds. Phenols in cigarette smoke condensate were much higher than those
 in roasted tobacco volatiles. By column chromatog. of the roasted tobacco
 volatiles, components with burnt sugar-like aromas such as
 2-hydroxy-3-methyl-2-cyclopentenone, 3-hydroxy-2-methylpyran-4-one, and
 4-hydroxy-2,5-dimethyl-3(2H)-furanone were identified, and these are
 assumed to play an important role in the development of the aroma of
 roasted tobacco volatiles. Although the cigarette smoke condensate
 contained components with a burnt sugar-like aroma such as
 2-hydroxy-3-methyl-2-cyclopentenone in much higher concns. than roasted
 tobacco volatiles, their aroma was suppressed by coexistent components,
 probably volatile N-basic substances.

CC 11-7 (Plant Biochemistry)
 Section cross-reference(s): 62

ST tobacco roasted volatile **essential oil** compn;
 cigarette smoke condensate compn

IT Tobacco
 (**essential oil** of and volatiles of roasted, compn.
 of)

IT Phenols, biological studies
Terpenes and Terpenoids, biological studies

RL: BIOL (Biological study)
 (of roasted tobacco volatiles and tobacco **essential**
oil and cigarette smoke condensate)

IT 54-11-5 67-47-0 80-71-7 96-48-0 110-86-1, biological
 studies 116-09-6 118-71-8 497-23-4 591-11-7 592-20-1 766-39-2
 1073-96-7 3008-40-0 3658-77-3 17678-19-2 28564-83-2 52126-90-6
 RL: BIOL (Biological study)

(of roasted tobacco volatiles and cigarette smoke conc.)

IT 122-78-1 1117-52-8 1937-54-8 3188-00-9 3796-70-1 17092-92-1

23726-91-2 40525-38-0 60619-46-7

RL: BIOL (Biological study)

(of roasted tobacco volatiles and tobacco **essential oil**)

IT 60-12-8 64-19-7, biological studies 65-85-0, biological studies
79-09-4, biological studies 98-00-0 98-01-1, biological studies
100-51-6, biological studies 107-92-6, biological studies 108-28-1
109-52-4, biological studies 111-14-8 124-07-2, biological studies
142-62-1, biological studies 503-74-2 504-96-1 620-02-0 1072-83-9
1192-62-7 2628-17-3 3724-65-0 3857-25-8 13215-88-8 35734-61-3

RL: BIOL (Biological study)

(of roasted tobacco volatiles and tobacco **essential oil** and cigarette smoke condensate)

IT 78-70-6 79-31-2 100-52-7, biological studies 110-93-0 7786-61-0
13215-89-9 34318-21-3

RL: BIOL (Biological study)

(of tobacco **essential oil**)

IT 57-10-3, biological studies 84-74-2

RL: BIOL (Biological study)

(of tobacco **essential oil** and cigarette smoke conc.)

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DEL HIS Y

L1 2153 S NICOTINE OR NICODERM OR NICORETTE OR NICOTIN OR NICONIL OR NI
L2 7355 S ?TERPENE? OR ?TERPENOID?
L3 44060 S ?KETONE?
L4 9 S L1 AND L2

FILE 'WPIDS' ENTERED AT 08:29:10 ON 03 JAN 2002

=> d .wp tech 1-9

L4 ANSWER 1 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 2001-381261 [40] WPIDS
DNC C2001-116753
TI Pharmaceutical, cosmetic, dietetic or nutritional compositions containing
ozonized oil and thioctic acid, useful e.g. for treating or preventing
dermatitis, acne, ulcers or effects of oxidative stress.
DC B05 C03 D13 D21
IN DALL'AGLIO, R; GOMEZ MORALED A, M; MELEGARI, P
PA (DALL-I) DALL'AGLIO R; (MORA-I) GOMEZ MORALED A M; (MELE-I) MELEGARI P
CYC 93
PI WO 2001037829 A1 20010531 (200140)* ES 33p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
NL OA PT SD SE SL SZ TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK
LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
AU 2000050796 A 20010604 (200153)
ADT WO 2001037829 A1 WO 2000-ES208 20000609; AU 2000050796 A AU 2000-50796
20000609
FDT AU 2000050796 A Based on WO 200137829
PRAI ES 1999-2602 19991125
AB WO 200137829 A UPAB: 20010719
NOVELTY - A novel composition (I) comprises 0.01-99.99 (preferably
0.01-50) wt. % of each of: (a) one or more of ozonized oils and/or other
ozonized natural or synthetic products and (b) thioctic acid and/or its

derivatives.

ACTIVITY - Dermatological; antiinflammatory; antibacterial; antiseborrheic; antiulcer; vulnerary.

MECHANISM OF ACTION - Oxygen carrier; antioxidant; antiradical.

USE - (I) is specifically used in pharmaceutical, cosmetic, dietetic or nutritional compositions (all claimed). In particular, (I) is used as a medicament for preventing or treating dermatitis, infections, acne, ulcers (including gastrointestinal ulcers), scars, burns, tissue lesions, cellular dysfunction, energy-producing metabolic disorders and disorders in the enzymatic systems providing protection against oxidation, environmental factors, free radicals, oxidative stress and stress in general, in humans or animals (all claimed).

In tests for the treatment of gastrointestinal ulcers associated with Helicobacter pylori infection, administration of capsules containing 1 g of a mixture of 50 wt. % silica gel, 48 wt. % ozonized oil, 1.9 wt. % thiocetic acid and 0.1 wt. % melatonin, at 2 capsules per day for the first 7 days then subsequently at one capsule per day, completely eradicated the ulcers and infection in 8/10 patients within 21 days and in 9/10 patients within 42 days.

ADVANTAGE - The oxygen carrier (a) and the antioxidant (b) each potentiate the beneficial effects of the other component, e.g. in stimulating enzymatic, cellular and metabolic functions.

Dwg.0/0

TECH

UPTX: 20010719

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: (I) also contains one or more active agents, additives, carriers and/or excipients suitable for use in pharmaceutical, veterinary, cosmetic, dietetic or food/feed supplement applications. In particular, (I) contains one or more of: (i) aminoacids (specifically cysteine, arginine, glycine or N-acetyl-cysteine) and their derivatives, at 0.01-25 wt. %; (ii) organic acids (specifically fumaric, succinic, eicosapentaenoic, hyaluronic or pantothenic acid) or their derivatives, at 0.01-25 wt. %; (iii) vitamins (specifically of group A, B, C, D, E or F) or their precursors or derivatives, at 0.01-25 wt. %; (iv) glutathione, acetylglucosamine, bioflavonoids or coenzyme Q10 or their derivatives, at 0.01-25 wt. %; (v) melatonin or its derivatives or mono-, di- or triterpenes or their derivatives, at 0.01-10 wt. %; (vi) essential fatty acids (specifically linoleic acid or acids of the (omega-3) or (omega-6) type) or their derivatives, at 0.01-50 wt. %; (vii) phytoestrogens or their derivatives or alkaloids (specifically nicotine, yohimbine, carnitine or galantoin) or their derivatives or precursors, at 0.01-10 wt. %; (viii) film formers (specifically polyfluorocarbons forming a protective skin), at 0.01-10 wt. %; and (ix) microorganisms or probiotic ferments (specifically Lactobacillus LC1, rhamnosus GG or Bacillus subtilis), at 1-20 wt. %.

TECHNOLOGY FOCUS - POLYMERS - Preferred Materials: (I) optionally contains film formers specifically polyfluorocarbons forming a protective skin.

L4 ANSWER 2 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2001-267498 [28] WPIDS

DNC C2001-081170

TI Composition useful for delivery of drugs or cosmetic agents includes an epidermal permeation enhancer comprising monoacyl lysophospholipids.

DC B05 D21

IN BISHOP, M; GILLIS, G; NORTON, S J

PA (ACTI-N) ACTIVE ORGANICS INC

CYC 25

PI EP 1080719 A2 20010307 (200128)* EN 24p

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT

RO SE SI

ADT EP 1080719 A2 EP 2000-118980 20000901
 PRAI US 2000-654421 20000901; US 1999-152305P 19990903
 AB EP 1080719 A UPAB: 20010522

NOVELTY - Composition comprising at least one active ingredient in combination with an epidermal permeation enhancer comprising monoacyl lysophospholipids (I) is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a method for increasing the epidermal permeation of an active ingredient for improving the health, appearance and condition of the skin, comprising mixing the active ingredient with (I);

(2) a method for increasing the epidermal permeation of an active ingredient on a transdermal patch, comprising applying (I) to the patch.

USE - The composition is useful for topical, percutaneous or transdermal delivery of drugs that act on epidermal or subepidermal layers, especially steroid hormones, peptide hormones, lipid hormones or nucleic acid based polymers, or agents that improve the health, appearance and condition of the skin.

ADVANTAGE - (I) increase the permeability of the epidermal barrier, thereby increasing the efficacy of topically applied drugs or cosmetic agents.

Dwg.0/0

TECH

UPTX: 20010522

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Active Ingredients: These are drugs that act on epidermal or subepidermal layers, especially: steroid hormones, e.g. progesterone, estrogen, testosterone or their derivatives; peptide hormones, e.g. melatonin, AGHA, IGF, interleukins, interferons, MSH, a-TGF, b-TGF, TNF or MCH; lipid hormones, e.g. platelet-derived growth factor, retinoic acid, leukotrienes or prostaglandins; or nucleic acid based polymers. The drug may be an analgesic (especially acetylsalicylic acid, ibuprofen, acetaminophen, capsaicin, menthol, and methyl salicylate); for treating arthritis; for inducing vasodilation (especially sildenafil, arginine and compounds effecting the levels and action of nitric oxide); for treating addiction (especially **nicotine**); for depression (e.g. naltrexone, valium, serotonin uptake inhibitors); for treating cancer; heart disease (e.g. nitroglycerine); bacterial infections (e.g. penicillins, tetracyclines); viral infections (e.g. AZT, interferon); parasitic infestations (especially ivermectin); fungal infections; antioxidants (e.g. propyl gallate); and also agents acting as oxygen deliverers, for diminishing hyperpigmentation, exfoliants, as a superficial, medium depth or deep skin peel, astringents, humectants, drugs acting as isoflavones (e.g. genisten, glycitein), drugs acting as **terpenoids**, drugs acting as vitamins and a wide range of specified substances useful as cosmetic actives.

L4 ANSWER 3 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2000-629108 [61] WPIDS

DNN N2000-466152 DNC C2000-188659

TI **Nicotine**-containing transdermal therapeutic system for antismoking therapy, containing essential oil from mint or derived **monoterpene** ketone as effective odor masking agent.

DC B03 B05 D22 P32 P34

IN BRACHT, S

PA (LOHM) LTS LOHMANN THERAPIE-SYSTEME GMBH & CO

CYC 35

PI DE 19913732 A1 20000928 (200061)* 4p

WO 2000057824 A1 20001005 (200061) DE

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: AU BR CA CN CZ HU IL IN JP KR MX NZ PL RU TR US ZA

AU 2000038134 A 20001016 (200106)

ADT DE 19913732 A1 DE 1999-19913732 19990326; WO 2000057824 A1 WO 2000-EP2457 20000321; AU 2000038134 A AU 2000-38134 20000321

FDT AU 2000038134 A Based on WO 200057824

PRAI DE 1999-19913732 19990326

AB DE 19913732 A UPAB: 20001128

NOVELTY - A transdermal therapeutic system, including a backing layer, at least one **nicotine**-containing layer or zone (which may also show adhesive properties) and a removable protective layer, contains at least one of (a) essential oil obtained from a mint family plant or (b) **monoterpene** ketones present in essential oils (a).

USE - For antismoking therapy.

ADVANTAGE - Oils (a) or ketones (b) effectively neutralize or mask the odor of **nicotine** during packaging and use of the systems, even over long periods. The ketones are more effective masking agents than the corresponding alcohols (e.g. methone is more effective than menthol). Dwg. 0/1

TECH UPTX: 20001128

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The **monoterpene** ketones are used in the form of pure enantiomers or their mixtures. The essential oil is curled mint oil (Oleum Menthae crispae). The **nicotine**-containing matrix contains **monoterpene** ketone(s) at 0.1-5 (preferably 0.5-2) wt. %.

L4 ANSWER 4 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 2000-181023 [16] WPIDS

DNN N2000-133526 DNC C2000-056439

TI Devices for controlled release of active agent to skin or mucosa, substantially free of solvent and produced more economically requiring less loading of active agent to obtain desired dosage rate.

DC A18 A28 A96 B07 D22 P32

IN POLLOCK, W C; WEIMANN, L J; WICK, J J

PA (BERT-N) BERTEK INC

CYC 1

PI US 6010715 A 20000104 (200016)* 27p

ADT US 6010715 A Cont of US 1992-861534 19920401, Div ex US 1995-426492 19950420, CIP of US 1995-477042 19950607, CIP of US 1995-477312 19950607, US 1997-954861 19971021

FDT US 6010715 A Div ex US 5662926, CIP of US 5676969, CIP of US 5679373

PRAI US 1997-954861 19971021; US 1992-861534 19920401; US 1995-426492 19950420; US 1995-477042 19950607; US 1995-477312 19950607

AB US 6010715 A UPAB: 20000330

NOVELTY - Devices for controlled release of active agent to skin or mucosa of host.

DETAILED DESCRIPTION - Devices comprise laminate of (a) monolithic carrier with 1st and 2nd surfaces comprising active ingredient such as active agent and/or active agent enhancer, melt-blended with thermoplastic matrix polymer with melt temperature of 170-200 deg. C, such as polyether block amide, ethylene methacrylic acid copolymer, ethylene acrylic acid polymer, copolymer of polyether prepolymers with polybutylene terephthalate, copolymers of polyether prepolymers with polyisobutylene terephthalate and polyether polyurethanes, and formed into the carrier layer without first dissolving or suspending the polymer or active ingredient in a solvent so that the carrier layer is substantially free of residual solvent, the polymer being capable of controllably releasing the active ingredient and the active ingredient being heat-stable at the melt temperature of the polymer; (b) backing layer with inner and outer surfaces, with the 2nd surface of (a) and the inner surface of (b) laminated together with adhesive so that the active ingredient cannot permeate through the outer surface of (b); and (c) pressure-sensitive

adhesive layer to affix the laminate to the skin or mucosa of the host so that the active ingredient is capable of being continuously released from the 1st surface of (a).

ACTIVITY - Psychoactive; sedative; antidepressant; anticonvulsant; steroid; analgesics; antimicrobial; tranquilizers; antineoplastic; antibiotic.

USE - Used for controlled release of active agents such as psychoactive agents (**nicotine**, caffeine, mesocarb, mefexamide, cannabinals), sedatives (diazepam, mepiridine, uldazepan, tybamate, metaclazepam, tetrabarbitol), antidepressants (amitryptiline, imipramine, desipramine, nialamide, melitracen, isocarboxazid), anticonvulsants (phenobarbitol, carbamazepine, methsuximide, 1-ethyl-2-phenylmalonamide, phenytoin), steroids (progesterone, testosterone, pregnanediol, progestin, estradiol), narcotic analgesics (codeine, morphine, analorphine, demeral), analgesics (acetaminophen, aspirin, alprazolam), antimicrobials (sulconazole, siccamin, silver sulfadiazene, bentiocide), tranquilizers, antineoplastics (sulfosamide, rufocromomycin), antibiotics (tetracycline, penicillin, streptozocin) to host skin or mucosa (claimed).

ADVANTAGE - Carrier layer is substantially free of residual solvent (claimed). Preparation is more economical than prior art methods because less loading of active agent is required to obtain the desired dosage rate.

DESCRIPTION OF DRAWING(S) - Side, cross-sectional view of device.

Transdermal delivery patch device; 10
carrier layer; 12
active agent skin-contact adhesive layer; 14
carrier layer surface; 15
backing layer; 16
carrier layer surface opposite (14); 17
adhesive layer; 18
protective liner 20

Dwg.1/15

TECH

UPTX: 20000330

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred devices - Device comprises removable liner layer with 1st and 2nd surfaces, the 1st comprising releasable surface, bottom layer comprising 1st and 2nd surfaces and laminates between the 1st surface of the bottom layer and the 1st surface of the liner layer, in which (b) of each laminate is affixed to the 1st surface of the bottom layer, means for affixing each laminate to the skin or mucosa is affixed to the liner layer and the 1st surface of the liner layer is releasably heat sealed to the 1st surface of the bottom layer at least at a location between two of the laminates so as to physically separate the at least two laminates prior to removal of the removable liner layer from the bottom layer, whereby removal of the removable liner layer eliminates the heat seal. Releasable surface comprises siliconized coating. Liner layer comprises one or more layers, each made of paper, thermoplastic polymer or metal foil. Bottom layer comprises polyethylene (preferred), polypropylene, polyvinylidene chloride, polyethylene terephthalate, polyesters or polyamides. Rate-controlling layer or active agent permeable adhesive layers further comprise active agent enhancer. Active agent enhancer is melt-blended with one or more of the rate-controlling polymer layers and either of the active agent permeable adhesive layers and is heat stable at a melt temperature of 170-200degreesC. Active agent enhancer is a monovalent, (un)saturated (cyclo)aliphatic 612C alcohol, (cyclo)aliphatic hydrocarbon, cycloaliphatic or aromatic aldehyde or ketone, N,N-di-(lower alkyl) acetamide, (cyclo)aliphatic ester, N,N-di-(lower alkyl) sulfoxide, essential oil, nitrated (cyclo)aliphatic hydrocarbon, salicylate, polyalkylene glycol silicate, aliphatic acid, **terpene**, surfactant or siloxane. Preferred laminate - Laminate further comprises

means for controlling the rate at which active ingredient is released from the 1st surface of (a) to host skin or mucosa, preferably comprising active ingredient impermeable adhesive layer affixed to 1st surface of (a) and adapted to adhere 1st surface of (a) to host skin or mucosa, which is capable of controlling rate at which active ingredient is released from 1st surface of (a) to skin or mucosa or comprises rate-controlling polymer layer affixed to 1st surface of (a) and adhered to host skin or mucosa by active ingredient impermeable adhesive layer affixed to rate-controlling polymer layer on surface opposite (a). Means for affixing laminate to skin or mucosa further comprises active ingredient permeable adhesive layer affixed to 1st surface of (a). Rate-controlling polymer layer comprises polypropylene, polyethylene, ethylene vinyl acetate, polyether polyurethanes, polyether block amides, ethylene methacrylic acid copolymers, ethylene acrylic acid copolymers or copolymers of polyether prepolymers and polybutylene terephthalate and polyisobutylene terephthalate. Preferred backing layer - (b) comprises active ingredient impermeable material. (b) extends peripherally beyond (a) about its entire periphery to define and extended peripheral area of (b) and the means for affixing the laminate to the skin or mucosa comprises adhesive layer adapted to adhere extended peripheral area of (b) to the skin or mucosa. Inner surface of (b) is affixed to 2nd surface of (a) by (c) and (c) extends peripherally beyond the carrier layer about its entire periphery coextensively with the extended peripheral area of the backing layer. (b) comprises layer(s) of occlusive material chosen from cellophane, cellulose acetate, ethyl cellulose, plasticized vinyl acetate-vinyl chloride copolymers, ethylene-vinyl acetate copolymer, polyethylene terephthalate (preferred), nylon, polyethylene (preferred), polypropylene (preferred), polyvinylidene chloride (preferred), paper, cloth or aluminum foil. Preferred adhesive layer - (c) is affixed to 1st surface of (a). Adhesive laminating inner surface of (b) to 2nd surface of (a) active-ingredient impermeable. (c) is a polyisobutylene adhesive, silicon adhesive, acrylic adhesive or synthetic rubber adhesive, preferably comprising polymer of alcohol esters of acrylic or methacrylic acid, especially esters of alcohol chosen from N-butanol, isopentanol, 2-methylbutanol, 1-methylbutanol, 1-methylpentanol, 2-methylpentanol, 3-methylpentanol, 2-ethylbutanol, isooctanol, n-decanol or n-dodecanol, most especially copolymerized with one or more ethylenically unsaturated monomers chosen from acrylic acid, methacrylic acid, acrylamide, methacrylamide, N-alkoxymethyl acrylamide, N-alkoxymethyl methacrylamide, N-tert. butyl acrylamide, itaconic acid, vinyl acetate, N-branched alkyl malemic acid with 10-24C alkyl group and glycol diacrylates. (b) comprises dermatologically acceptable pressure-sensitive adhesive chosen from polyurethane elastomers, polyvinyl alcohol, polyvinyl ethers, polyvinyl pyrrolidone, polyvinyl acetate, urea formaldehyde resins, phenol formaldehyde resins, resorcinol formaldehyde resins, ethyl cellulose, methyl cellulose, nitrocellulose, cellulose acetate butyrate, carboxymethyl cellulose, guar gum, acacia gum, pectina gum, destria gum, gelatin and casein. Preferred active ingredient - Active ingredient is a psychoactive agent (**nicotine** (preferred), caffeine, mesocarb, mephexamide, cannabinals), sedative (diazepam, mepiridine, uldazepam, tybamate, metaclozepam, tetrabarbitol), antidepressant (amitriptyline, imipramine, desipramine, nialamide, melitracen, isocarboxazid), anticonvulsant (phenobarbitol, carbamazepine, methsuximide, 1-ethyl-2-phenylmalonamide, phenytoin), steroid (progesterone, testosterone, pregnanediol, progestin, estradiol), narcotic analgesic (codeine, morphine, analorphine, demeral), analgesic (acetaminophen, aspirin, alprazolam), antimicrobial (sulconazole, siccamin, silver sulfadiazene, bentiocide), tranquilizer, antineoplastic (sulfosamide, rufocromomycin), antibiotic (tetracycline, penicillin, atreptozocin). Active ingredient further comprises heat-resistant liquid carrier

compatible with thermoplastic matrix polymer.

L4 ANSWER 5 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
 AN 1996-461284 [46] WPIDS
 DNN N1996-388876 DNC C1996-144549
 TI New **terpene** compound and an improving agent for tobacco - used
 as additive for tobacco with low tar and **nicotine** content.
 DC D18 D23 E15 P15
 PA (NISB) JAPAN TOBACCO INC
 CYC 1
 PI JP 08231451 A 19960910 (199646)* 4p
 ADT JP 08231451 A JP 1995-40132 19950228
 PRAI JP 1995-40132 19950228
 AB JP 08231451 A UPAB: 19961115

A **terpene** cpd. of formula (I) is new.

Terpene cpd. is 1-isopropyl-5-(hydroxymethyl)-8-methyltricyclo (4.4.0.0^{2,8})deca-4-ene, obtd. by extn. with an organic solvent from *Nicotiana umbratica*, followed separation-purification. The **terpene** is used in an amount in the range of 0.01-100 ppm, based on cut tobacco (wt.). The improving agent opt. contains e.g. Solanone and linolenic acid.

USE/ADVANTAGE - **Terpene** cpd. is a useful material for tobacco whose content of **nicotine** and tar is low. By addition of the **terpene** cpd. to tobacco whose content of **nicotine** and tar is low, the tobacco has favourable odour and large smoking amount.

In an example, chloroform dissolvable leaves-face resin ingredient was extracted by dip of fresh leaves (2.4kg) of *Nicotiana umbratica* in chloroform (2.5l). After treatment, leave-face resin (37.78g) was obtd.. By silica gel column chromatography of a chloroform soln. of the resin, 4 fractions (fraction 1-4) were obtd.. By silica gel column chromatography of the condensed 1st fraction (16.47g), 4 fractions (fraction(1-1)-fraction(1-4)) were obtd.. By silica gel column chromatography of the condensed 3rd fraction (0.93g) (1-3), 4 fractions (fraction(1-3-1)-fraction(1-3-4)) were obtd.. By HPLC of condensed fraction (1-3-3) (0.16g) for 14.4 mins, **terpene** cpd. of formula (I) (88.1mg) was obtd..

Dwg.0/0

L4 ANSWER 6 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
 AN 1994-283354 [35] WPIDS
 DNN N1994-223298 DNC C1994-129280
 TI New di **terpene** glucosides - useful in smoke flavour improvers
 for tobacco (H₃C(CH₂R₂)-(CH(CH₂)₂C(CH₃)-)₂CH(CH₂)₂C(CH₃)(R₁)CH-CH₂ a
diterpene glucoside of formula (I) is new.
 DC D18 E13 P15
 PA (NISB) JAPAN TOBACCO INC
 CYC 1
 PI JP 06211885 A 19940802 (199435)* 8p
 ADT JP 06211885 A JP 1993-6177 19930118
 PRAI JP 1993-6177 19930118
 AB JP 06211885 A UPAB: 19941021

In the formula R₁, R₂=sugar chain consisting of D-glucose and L-rhamnose and when R₁=O-beta-D-glycosyl(R_{1a}), R₂=O-(alpha-L-rhamnopyranosyl-(1-4))-[alpha-L-rhamnopyranosyl (1-6)]-beta-D-glucopyranosyl(R_{2a}) and when R₁=O-alpha-L-rhamnopyranosyl(1-4)-beta-D-glucosyl(R_{1b}), R₂=O=[beta-D-glucopyranosyl(1-2)]-[alpha-L-rhamnopyranosyl(1-6)]-beta-D-glucopyranosyl (R_{2b}) or R_{2a}. Also claimed are smoke flavour improvers contg. (I) as effective components.

USE/ADVANTAGE - The **diterpene** glucosides have excellent smoke flavour improving effect and storage stability. The smoke flavour

improvers are useful in a small amt. of improving smaoke flavour and smaoke amt. of low **nicotine** low tar cogarettes.
Dwg.0/0

L4 ANSWER 7 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1991-073536 [10] WPIDS
CR 1990-083511 [11]
DNC C1991-031173
TI Yeast having enhanced astaxanthin content - obtd. by culturing in the presence of a metabolic pathway inhibitor to trigger a sec. respiratory pathway.
DC C03 D16
IN GELDIAY-TUNCER, B; HALL, W T; HO, K P; JOHNSON, E A; SCHREIBER, D; YANG, H; HO, K
PA (IGEN-N) IGENE BIOTECHNOLOGY INC; (IGEN-N) IGENE BIOTECHN INC
CYC 5
PI WO 9102060 A 19910221 (199110)*
W: AU KR SU
AU 9055385 A 19910311 (199123)
US 5182208 A 19930126 (199307) 14p
US 5356809 A 19941018 (199441) 9p
AU 653916 B 19941020 (199443)
CA 1335884 C 19950613 (199531)
KR 191671 B1 19990615 (200056)
ADT US 5182208 A CIP of US 1988-229536 19880808, Cont of US 1989-385961 19890728, US 1989-399183 19890823; US 5356809 A CIP of US 1988-229536 19880808, Cont of US 1989-385961 19890728, Div ex US 1989-399183 19890823, US 1992-837120 19920214; AU 653916 B AU 1990-55385 19900205; CA 1335884 C CA 1989-607791 19890808; KR 191671 B1 KR 1992-700201 19920128
FDT AU 653916 B Previous Publ. AU 9055385, Based on WO 9102060
PRAI US 1989-385961 19890728
AB WO 9102060 A UPAB: 20001106
A process for the prodn. of a yeast having an enhanced astaxanthin (AX) content is claimed comprising (a) morphological selection by culturing a yeast of the genus *phaffia* in a nutrient medium contg. an antibiotic, cytochrome B inhibitor or a **terpenoid** synthetic pathway inhibitor and (b) before and/or after morphological selection, subjecting the yeast to a total of 2 or more steps of mutagenesis.
The morphological selection may be with e.g. antimycin, tunicamycin, nystatin, 2-n-heptyl-4-hydroxy-quinoline-N-oxide or mevalonic acid lactone. The mutagenesis may be carried out with e.g. ethyl methane sulphonate (EMS), N-methyl-N-nitro-N-nitrosoguanidine (NTG), UV exposure, 2-deoxyglucose, ketoconazole, miconazole, **nicotine**, imidazole, 2-methylimidazole, morpholine, thienoyltrifluoroacetone (TTFA), antimycin A, azide, NaCN, KCN or rotenone. Also claimed is a yeast having the identifying characteristics of *Phaffia*, the yeast having been obtd. by at least one step of morphological selection of naturally occurring *Phaffia* or of a mutant of naturally occurring *Phaffia* cultured using a medium contg. an antibiotic selection agent or a **terpenoid** synthetic pathway inhibitor and 2 or more steps of mutagenesis with NTG and screening for surviving yeast exhibiting enhanced pigmentation before and/or after morphological selection.
USE/ADVANTAGE - Yeast mutants with a 3-6 fold increase in AX content compared to the parental natural isolates can be obtd. The AX is used as a dietary food and pigment supplement for salmonids or fowl to increase the pigmentation of the flesh of the salmonids or the skin, flesh or egg yolk of the fowl. @ (45pp Dwg.No.0/3)
0/3

L4 ANSWER 8 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1989-089893 [12] WPIDS
DNN N1989-068307 DNC C1989-039947
TI Soln. aid for reducing amt. of cigarette smoking - contg. sophora root, swertia herb, ginseng, lilly-tree extract and water.
DC B04 D18 P15
PA (INAG-I) INAGAKI T
CYC 1
PI JP 01040432 A 19890210 (198912)* 2p
ADT JP 01040432 A JP 1987-194773 19870804
PRAI JP 1987-194773 19870804
AB JP 01040432 A UPAB: 19930923

Sophora root, 60g swertia herb, 60g ginseng, 50g and a component extracted from a lily tree, 60g are mixed with water, 2 litres at around the b.pt.. The water is provided in a container, and is sprayed in mouth.

The sophora root contains alkaloid and flavoid, providing **nicotine** action. the swertia herb and the ginseng contain **triterpene** and the saponin respectively. the **triterpene** and the saponin flavours the extracted component of the lily tree, changing flavour to the **nicotine**, resulting in distasting the **nicotine**. The soln. is provided in a cap-loaded container including a spray mechanism for spraying soln. in mouth.

USE/ADVANTAGE - The soln. is used for reducing smoking and reacts with **nicotine**, distasting smoking flavour. Continuous application of the soln. consequently reduces the amt. of smoking, eliminating **nicotine** in a body resulting in no demand for smoking.

O/O

L4 ANSWER 9 OF 9 WPIDS COPYRIGHT 2002 DERWENT INFORMATION LTD
AN 1987-314839 [45] WPIDS
DNN N1987-235632 DNC C1987-133858
TI High vol. polypropylene fibres for cigarette filters - obtd. from fringed fibres spun with blowing agent, impregnated with calcium carbonate, starch and polyethylene glycol.
DC A32 A88 A94 D18 E19 E37 F01 P15
IN CUNDARI, F
PA (SPTS-N) SPT SRL
CYC 14
PI EP 244548 A 19871111 (198745)* EN 8p
R: AT BE CH DE FR GB LI LU NL SE
JP 62263310 A 19871116 (198751)
ES 2001267 A 19880501 (198920)
US 4858629 A 19890822 (198942) 7p
IT 1189495 B 19880204 (199047)
EP 244548 B 19911218 (199151)
R: AT BE CH DE FR GB LI LU NL SE
DE 3683042 G 19920130 (199206)
ADT EP 244548 A EP 1986-830196 19860709; JP 62263310 A JP 1986-171945
19860723; ES 2001267 A ES 1986-1378 19860728; US 4858629 A US 1986-889321
19860623
PRAI IT 1986-20386 19860509
AB EP 244548 A UPAB: 19930922

Synthetic fibres with increased vol., comprise a porous central core and a large number of porous lateral filaments integral with the core and shorter than it, distributed along its length. The fibres may be of stereospecific polypropylene and propylene-ethylene copolymers. Tows of the synthetic fibres form **interpenetrating** ramified structures of increased vol. and porosity.

Fibres of increased vol. may be produced by (i) cold mixing with a blowing agent (ii) melting and spinning to cause swelling and fringing of

the fibres (iii) drawing (iv) heat-setting. The blowing agent may be chosen from azobicarbonamide, 4,4-hydroxy-bis -(benzene sulphil) hydrazide, ammonium carbonate and bicarbonate and/or alkaline metals, and the wt. ratio of polymer, pref. polypropylene, and blowing agent is between 0.05-1 wt.%. Melting and spinning is carried out at 260-310 deg. C, drawing at 1 : 2 to 1 : 3 and heat-setting at 105-130 deg. C.

Highly absorbent, rigid filters are produced from the fibres impregnated with particles of CaCO₃ treated with stearic acid or polyethylene glycol (PEG), or starch. Pref. the tow has a count of 30000 - 50000 denier, formed from fibres with a 3-8.5 denier count. After the spinning and drawing stages the tow is (d) impregnated in an aq. soln. of a stiffening agent, opt. contg. a suspension of porogenous agent (e) crimped (f) heat-set (g) treated with plasticiser (h) cut into small cylinders for cigarette filter prodn..

The aq. soln. of stiffening substances contain starch, traces of dilute acetic acid to assist hydrolysis of starch to maltose and dextrin, PEG, a suspended porogenous agent, chosen from talc, amorphous silica and pref. particles of CaCO₃.

ADVANTAGE - The fibres are materials and cost-saving, processable on conventional machinery, and highly selective for cigarette smoke tar, with high condensation capacity for cigarette smoke distillation, moisture, **nicotine** and tar.

0/0

=> d his

(FILE 'WPIDS' ENTERED AT 08:22:36 ON 03 JAN 2002)

DEL HIS Y

L1 2153 S NICOTINE OR NICODERM OR NICORETTE OR NICOTIN OR NICONIL OR NI
L2 7355 S ?TERPENE? OR ?TERPENOID?
L3 44060 S ?KETONE?
L4 9 S L1 AND L2

FILE 'WPIDS' ENTERED AT 08:29:10 ON 03 JAN 2002

=> fil medline

FILE 'MEDLINE' ENTERED AT 08:39:48 ON 03 JAN 2002

FILE LAST UPDATED: 2 JAN 2002 (20020102/UP). FILE COVERS 1958 TO DATE.

On April 22, 2001, MEDLINE was reloaded. See HELP RLOAD for details.

MEDLINE now contains IN-PROCESS records. See HELP CONTENT for details.

MEDLINE is now updated 4 times per week. A new current-awareness alert frequency (EVERYUPDATE) is available. See HELP UPDATE for more information.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2001 vocabulary. Enter HELP THESAURUS for details.

The OLDMEDLINE file segment now contains data from 1958 through 1965. Enter HELP CONTENT for details.

Left, right, and simultaneous left and right truncation are available in the Basic Index. See HELP SFIELDS for details.

THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE SUBSTANCE IDENTIFICATION.

=> d his 19-

(FILE 'BIOSIS' ENTERED AT 08:30:40 ON 03 JAN 2002)

FILE 'MEDLINE' ENTERED AT 08:35:55 ON 03 JAN 2002

L9 15468 S NICOTINE OR NICODERM OR NICORETTE OR NICOTIN OR NICONIL OR NI
L10 17472 S ?TERPENE? OR ?TERPENOID?
L11 51 S L9 AND L10
L12 258797 S DELIVER? OR ?DERMAL
L13 2 S L11 AND L12

FILE 'MEDLINE' ENTERED AT 08:39:48 ON 03 JAN 2002

=> d all 1-2

L13 ANSWER 1 OF 2 MEDLINE
AN 2000169488 MEDLINE
DN 20169488 PubMed ID: 10702628
TI Structure-activity relationship of chemical penetration enhancers in **transdermal drug delivery**.
AU Kanikkannan N; Kandimalla K; Lamba S S; Singh M
CS College of Pharmacy, Florida A & M University, Tallahassee, FL 32307, USA.. msachdeva@famu.edu
NC 2 G12 RR 03020-15 (NCRR)
5 S06 GM 08111-27 (NIGMS)
SO CURRENT MEDICINAL CHEMISTRY, (2000 Jun) 7 (6) 593-608. Ref: 52
Journal code: C02; 9440157. ISSN: 0929-8673.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200006
ED Entered STN: 20000629

Last Updated on STN: 20000629

Entered Medline: 20000621

- AB **Transdermal drug delivery** (TDD) is the administration of therapeutic agents through intact skin for systemic effect. TDD offers several advantages over the conventional dosage forms such as tablets, capsules and injections. Currently there are about eight drugs marketed as **transdermal patches**. Examples of such products include nitroglycerin (angina pectoris), clonidine (hypertension), scopolamine (motion sickness), **nicotine** (smoking cessation), fentanyl (pain) and estradiol (estrogen deficiency). Since skin is an excellent barrier for drug transport, only potent drugs with appropriate physicochemical properties (low molecular weight, adequate solubility in aqueous and non-aqueous solvents, etc) are suitable candidates for **transdermal delivery**. Penetration enhancement technology is a challenging development that would increase significantly the number of drugs available for **transdermal** administration. The permeation of drugs through skin can be enhanced by physical methods such as iontophoresis (application of low level electric current) and phonophoresis (use of ultra sound energy) and by chemical penetration enhancers (CPE). In this review, we have discussed about the CPE which have been investigated for TDD. CPE are compounds that enhance the permeation of drugs across the skin. The CPE increase skin permeability by reversibly altering the physicochemical nature of the stratum corneum, the outer most layer of skin, to reduce its diffusional resistance. These compounds increase skin permeability also by increasing the partition coefficient of the drug into the skin and by increasing the thermodynamic activity of the drug in the vehicle. This review compiles the various CPE used for the enhancement of TDD, the mechanism of action of different chemical enhancers and the structure-activity relationship of selected and extensively studied enhancers such as fatty acids, fatty alcohols and **terpenes**. Based on the chemical structure of penetration enhancers (such as chain length, polarity, level of unsaturation and presence of some special groups such as ketones), the interaction between the stratum corneum and penetration enhancers may vary which will result in significant differences in penetration enhancement. Our review also discusses the various factors to be considered in the selection of an appropriate penetration enhancer for the development of **transdermal delivery** systems.
- CT Check Tags: Human; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.
 *Administration, Cutaneous
 Chemistry, Pharmaceutical
 *Drug Delivery Systems
 Skin: AH, anatomy & histology
 Skin Absorption
 Structure-Activity Relationship
- L13 ANSWER 2 OF 2 MEDLINE
 AN 1999279182 MEDLINE
 DN 99279182 PubMed ID: 10349565
 TI In vitro study of **transdermal nicotine delivery**: influence of rate-controlling membranes and adhesives.
 AU Fang J Y; Chen S S; Huang Y B; Wu P C; Tsai Y H
 CS School of Pharmacy, Kaohsiung Medical College, Taiwan.
 SO DRUG DEVELOPMENT AND INDUSTRIAL PHARMACY, (1999 Jun) 25 (6) 789-94.
 Journal code: C8D; 7802620. ISSN: 0363-9045.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals

EM 199908
ED Entered STN: 19990913
Last Updated on STN: 19990913
Entered Medline: 19990830
AB The objective of this study was to evaluate the influence of a rate-controlling membrane and adhesive on the in vitro permeation of **nicotine**. The physicochemical properties of the adhesive, including adhesion and rheology (viscosity), were also detected. Higher permeability of **nicotine** was observed through a hydrophilic membrane than through a hydrophobic membrane. Natural rubber and silicone were used as the adhesive bases, respectively. The silicone adhesive showed the highest adhesion among all adhesive formulations. To increase the adhesion of natural rubber, a tackifier (polyisoprene) and a secondary tackifier (**terpene** polymer; Px 1150) were incorporated into the formulations to achieve acceptable adhesion. The **nicotine** permeation through silicone adhesive and three natural rubber adhesives with the secondary tackifier (2%, 4%, and 6% Px 1150) was close to that from a commercially available patch (Habitrol), although the loading amount of **nicotine** was not the same. A longer lag time during the in vitro permeation study of **nicotine** was required for the adhesives prepared in our laboratory than for the commercially available patch.
CT Check Tags: Animal; Comparative Study; In Vitro
*Adhesives: CH, chemistry
Administration, Cutaneous
Diffusion
*Drug Delivery Systems: MT, methods
*Ganglionic Stimulants: AD, administration & dosage
Ganglionic Stimulants: PK, pharmacokinetics
Membranes: PH, physiology
*Nicotine: AD, administration & dosage
Nicotine: PK, pharmacokinetics
Rats
Rats, Wistar
Rubber: CH, chemistry
Silicon: CH, chemistry
Solubility
Viscosity
RN 54-11-5 (**Nicotine**); 7440-21-3 (Silicon); 9006-04-6 (Rubber)
CN 0 (Adhesives); 0 (Ganglionic Stimulants)